

EAGLE RIVER GREENBELT PLAN



Municipality of Anchorage
Tony Knowles, Mayor

TRA/Farr

Municipality of Anchorage



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TONY KNOWLES,
MAYOR

OFFICE OF THE MAYOR


Dear Anchorage Residents:

The Eagle River Valley is a resource of enormous value to us all. Virtually the entire valley bottomland from the Eagle River campground to Chugach State Park is undeveloped and used extensively for recreation, particularly for canoeing, kayaking and rafting. Moreover, this land harbors large concentrations of moose, bears, wolves, bald eagles, salmon and trout all within a valley of scenic grandeur minutes from a population of over 244,000 people.

The uniqueness of this Valley setting has compelled the involvement of several concerned residents, the Eagle River Park and Recreation Advisory Board as well as State and Municipal Government to protect and enhance the recreational and habitat value of this land. This involvement has resulted in the Eagle River Greenbelt Plan. With this Plan, the proposal is made to set aside a protected 18-mile river corridor of nearly 4,100 acres for recreational development and wildlife viewing for the benefit of both present and future generations.

By working together, we can ensure that this unique resource becomes an important part of what make Anchorage a special place to live.

Thank you,


Tony Knowles
Mayor

EAGLE RIVER GREENBELT PLAN

April, 1985

TONY KNOWLES, MAYOR

Department of Community Planning
Municipality of Anchorage

TRA/Farr

AR 85-88
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I. INTRODUCTION

The Eagle River Greenbelt Plan expresses the public desire for recreation opportunities and habitat protection along a protected corridor of Eagle River. This plan is a demonstration that residential growth need not preempt the preservation of broad valley vistas, pleasant river experiences and wildlife viewing. Where else can one find such a large area of undeveloped land harboring moose, bears, wolves, raptors and all species of salmon and trout, virtually all under one ownership and within a Municipality of more than 244,000 people? The plan, in fact, recognizes the almost undiscovered uniqueness of this broad river valley and asserts that the protection of the river corridor in advance of development is not only worthwhile but provides long-term savings in acquisition costs by avoiding the inflationary effects of land values. The conversion of undeveloped, unsubdivided private land into a recreational amenity for the entire community benefits us all and specifically, would likely enhance the property values of those homes in adjacent subdivisions. Given the special character of Eagle River Valley, this public initiative in protecting and creating value represents the wise use of public funds. This opportunity for both recreational development and habitat protection which is both cost effective and instrumental in enhancing property values is extraordinary.

It is the uniqueness of the Eagle River Valley which has compelled the involvement of interested residents, the Eagle River Park and Recreation Advisory Board, Municipal and State staff and Eklutna, Inc. Public meetings in Eagle River and discussions with these groups and concerned residents have guided this planning process. The touchstone for an Eagle River Greenbelt has been protection of the stream-side corridor for water-based recreation and trail development coupled with protection of key habitat areas, particularly upstream. Given the general agreement on the purpose of the Greenbelt, discussion leading to this Plan has centered on the amount of Greenbelt acreage and its acquisition.

As now proposed, an Eagle River Greenbelt of some 4100 acres would be set aside protecting 18 river miles from the Eagle River Campground to Chugach State Park. Seven specific recreation sites totaling 247 acres allowing for vehicular access to Eagle River would be provided, and some 40 miles of trails developed, on both north and south sides of Eagle River.

Those key actions needed to implement the Eagle River Greenbelt Plan are summarized in the recommendations sec-

tion. The Plan is described in the following text and divided into three main sections. An inventory section describes the existing environment and is followed by the plan section which details the current proposal. An implementation section follows describing several approaches designed to make the Plan an on-the-ground reality. The Recommended Greenbelt Map, the Land Status Map and Wetlands and Floodplain Map are contained as part of this Plan. The remaining inventory maps and Opportunities and Constraints Map are available separately from the Municipal Department of Community Planning.

II. RECOMMENDATIONS

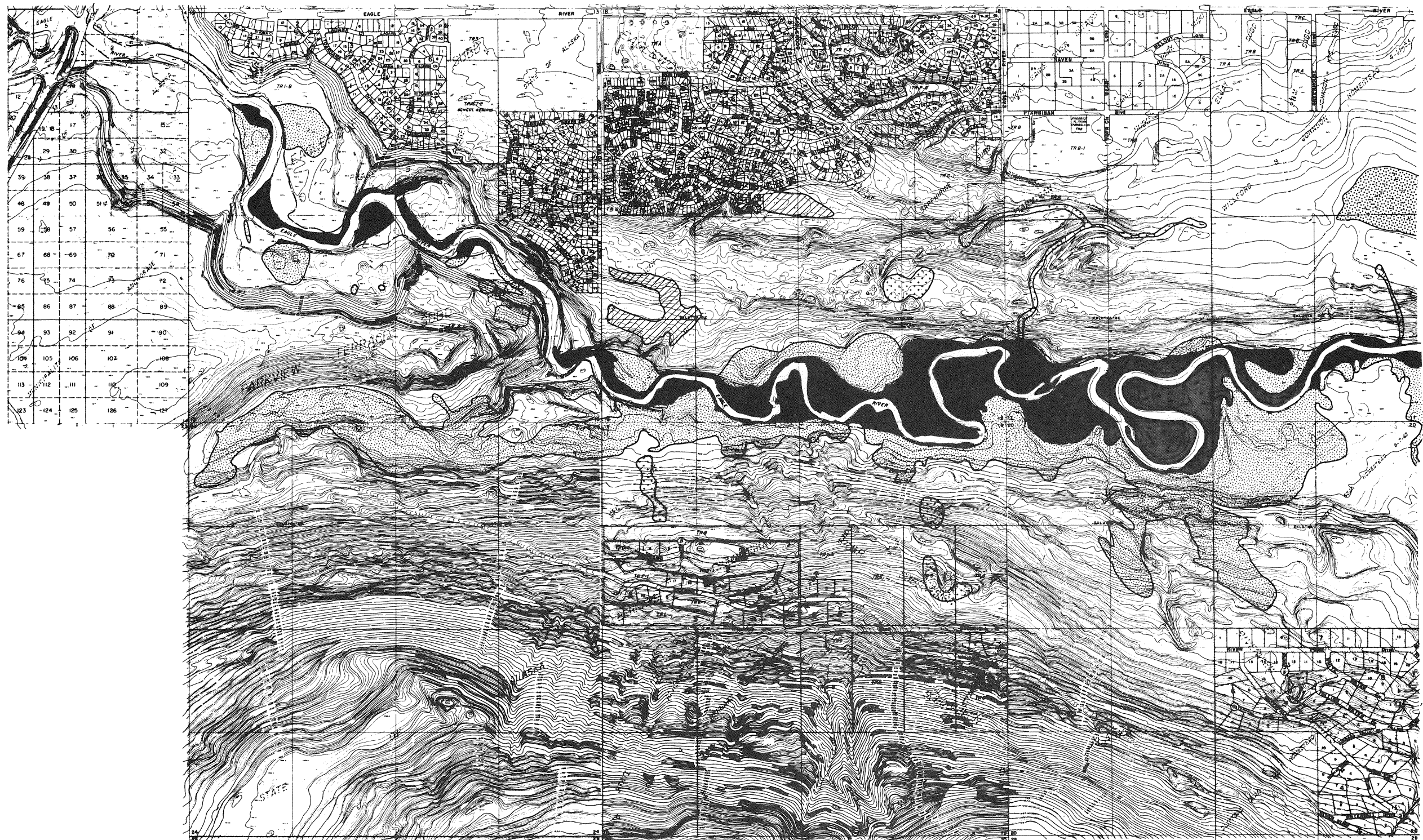
Key actions needed to adopt and implement the Eagle River Greenbelt Plan are summarized below. Each of these is discussed in greater length in the following text. As noted in the Implementation section, the complexity and amount of land included in this plan will require the utmost sensitivity to the needs of both the landowner and land user. Moreover, a commitment by all parties will be required to bring this magnificent and unique resource into reality.

1. Upon adoption by the Anchorage Assembly of the Eagle River Greenbelt Plan, the Municipality should enter into negotiation with Eklutna, Inc. and the three other private land owners to acquire the Greenbelt land together with the six recreation sites other than the Eagle River Campground Expansion site as soon as possible.
2. A mix of acquisition techniques should be used rather than a reliance upon a single approach. All of the techniques described in the text can contribute in varying degrees and should be woven together in an acquisition strategy. A high degree of cooperation and support between the Municipality and state agencies is necessary and must be cultivated and maintained. Consideration should be given to first negotiating an "umbrella agreement" to guide negotiation on the manner and basis for incorporation of Eklutna, Inc. owned land into the Greenbelt.
3. Development should follow acquisition in the creation of the Eagle River Greenbelt. Upon Greenbelt acquisition, Municipal Department of Parks and Recreation should then begin the process of site and trail development with a development priority that includes:
 - a. the six recreation sites,
 - b. the Greenbelt lands from the South Fork Park site downstream to the Eagle River Campground and including the South Fork Greenbelt link between the Park site and Waterfalls site; and
 - c. the remaining Greenbelt lands from South Fork upstream to Chugach State Park.

A detailed plan of management and operation should be prepared with involvement of user groups to accommodate the variety of recreational needs. The

potential for effective integration of such a plan with the proposed Eagle River Greenbelt Trust (see Section V) should be seriously considered. The proposed continuous trail system should be established under the general guidance of this Plan as well as the more specific direction of the management plan.

4. The Municipality should take the lead in exploring the potential of creating an Eagle River Greenbelt Trust. Such a Trust could serve not only as a vehicle for securing corporate and foundation funds leading to acquisition and management, but could serve as a community "watchdog" to ensure the integrity of the Greenbelt is maintained.
5. The State of Alaska, through the Division of Parks and Outdoor Recreation, should pursue acquisition of land adjacent to the Eagle River Campground site from Eklutna, Inc. as an expansion to the existing campground.
6. Chugach State Park trails should be connected with those Municipal trails/routes as indicated in this Plan.
7. The Eagle River Greenbelt Plan is consistent with the goals and policies of the Anchorage Coastal Management Plan which have identified most of the Greenbelt as Freshwater Marsh and Wetlands under the designation of Preservation Environment Coastal Resource Policy Unit.



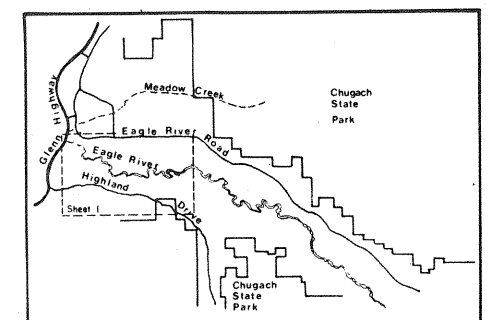
LEGEND

Wetlands Classification

- Preservation** 
- Conservation** 
- Development** 
- Mixed Development** 
- Unclassified** 

100 Year Floodplain 

NOTE: All wetlands areas within the 100 year floodplain are preservation wetlands.



DATE: November 1984

SCALE: 1" = 1400'

TRA/Farr
 ARCHITECTURE ENGINEERING PLANNING INTERIORS
 1001 E BENSON BLVD., ANCHORAGE, AK 99508 (907) 277-2641



PROJECT TITLE
**EAGLE RIVER
 GREENBELT PLAN**

SOURCE:
 U.S. Army Corps of Engineers, 1984
 (100 year floodplain and wetlands identification
 made in July and August respectively)

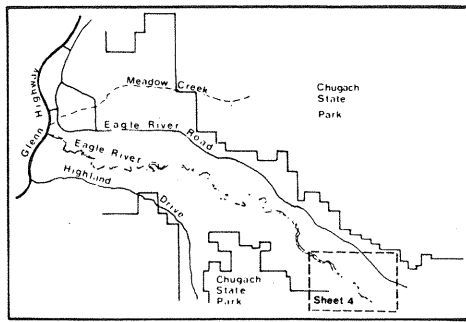
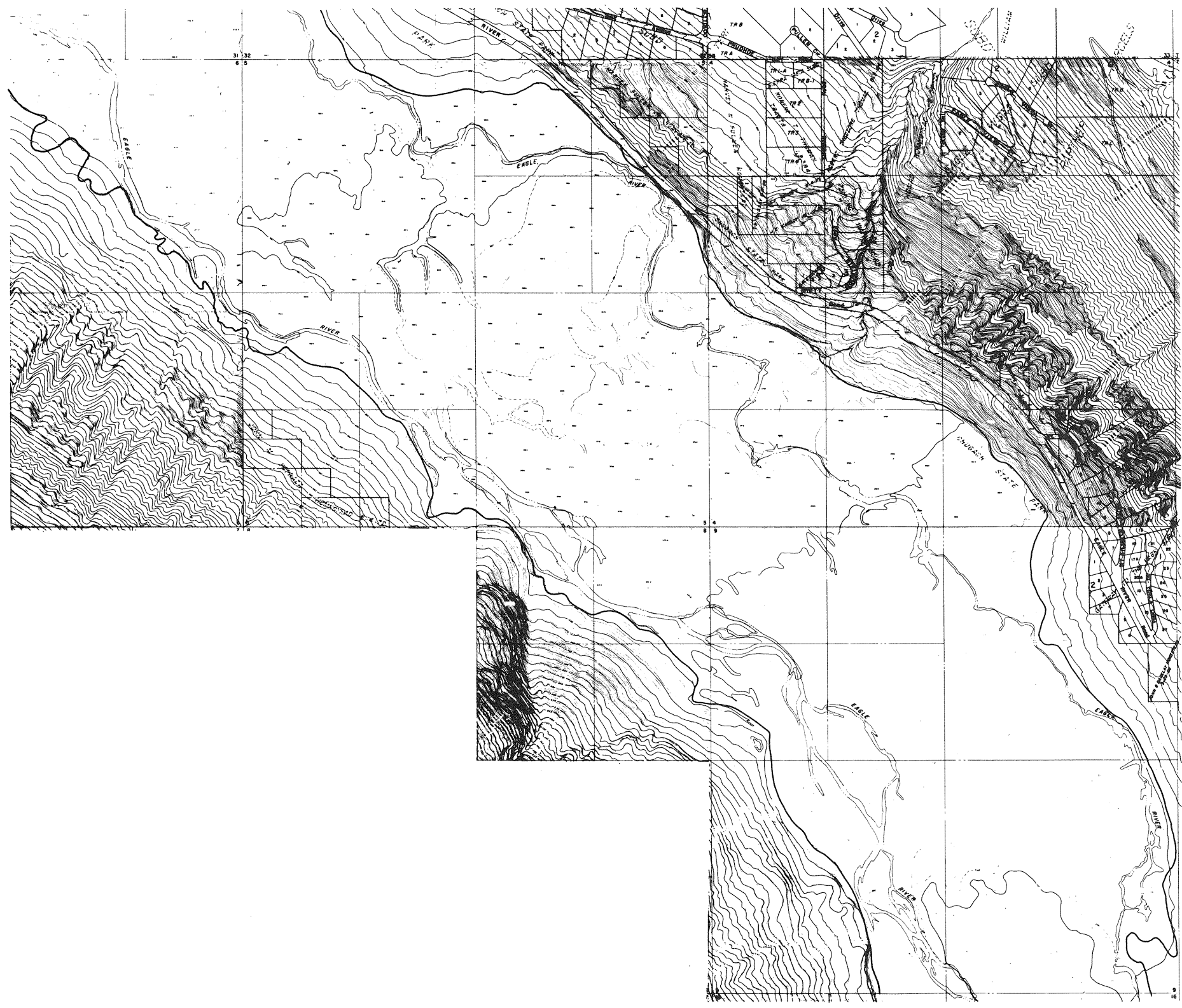
**Wetlands and
 Floodplain
 Map 4**

SHEET NO.

1

OF 4 SHEETS

IN THIS CATEGORY



SHEET NO.

4

OF 4 SHEETS

PROJECT CATEGORY

**Wetlands and
Floodplain
Map 4**

SOURCE: U.S. Army Corps of Engineers, 1984
(100 year floodplain and wetlands identification
made in July and August respectively)

PROJECT TITLE

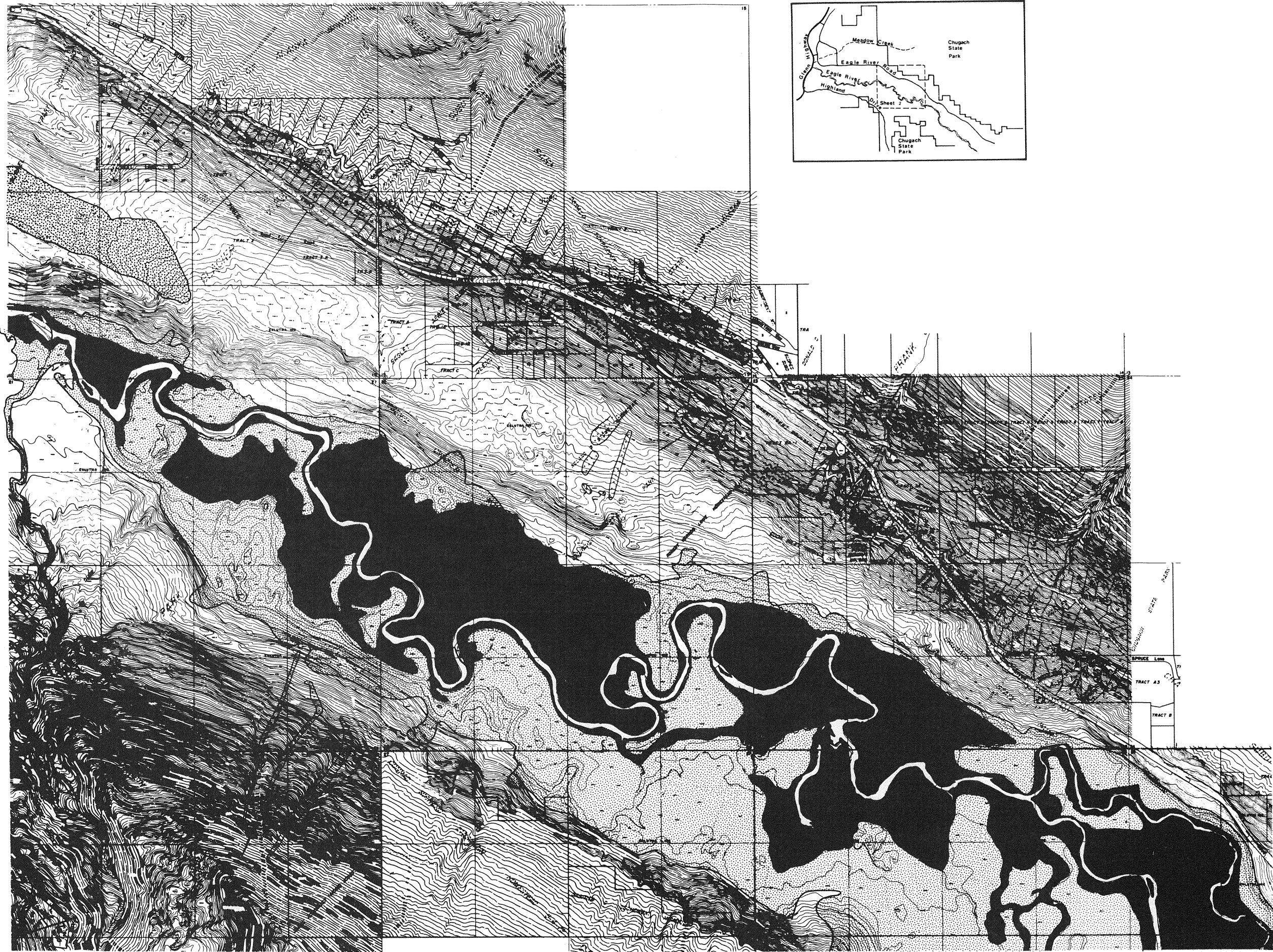
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SHEET NO.

2

OF 4 SHEETS

IN THIS CATEGORY

**Wetlands and
Floodplain
Map 4**

SOURCE: U.S. Army Corps of Engineers, 1984
(100 Year Floodplain delineation
made in July and August respectively)

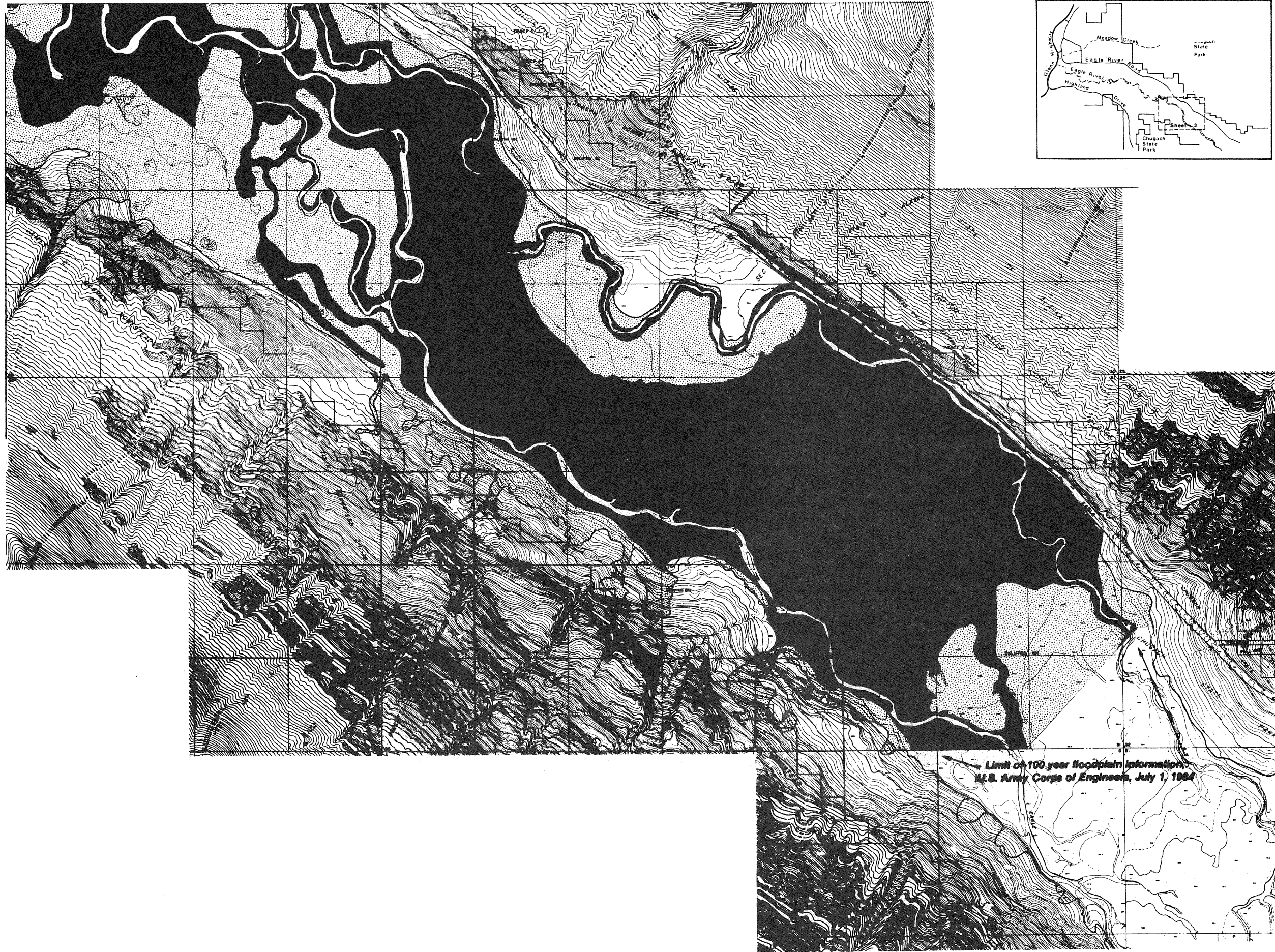
PROJECT TITLE

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DATE: November 1984
SCALE: 1" = 1400'



Limit of 100-year floodplain information,
U.S. Army Corps of Engineers, July 1, 1984

SHEET NO.
3
OF **4** SHEETS
IN THIS CATEGORY.

**Wetlands and
Floodplain
Map 4**

SOURCE
U.S. Army Corps of Engineers, 1984
(100 year floodplain and wetlands identification
made in July and August respectively)

PROJECT TITLE
**EAGLE RIVER
GREENBELT PLAN**



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SCALE: 1" = 1400'

III. INVENTORY

A process of mapping natural resource and existing land status information was used that resulted in an analysis of opportunities and constraints for the development of a greenbelt park along Eagle River. From this analysis, plan alternatives were formulated leading to a recommended greenbelt identifying greenbelt boundaries, recreation sites and trails. Initially, four base maps were produced with topography and land parcels indicated at a scale of 1"=500' which covered the study area from the Eagle River Campground near the Glenn Highway up Eagle River valley to the Eagle River Visitor Center within Chugach State Park. Overlays of inventory information such as wetlands and the 100-year floodplain were used repeatedly and proved very useful as the plan alternatives evolved. The five inventory maps produced were: Visual Character (Map 1), Vegetation (Map 2), Wildlife Habitat (Map 3), Wetlands and Floodplains (Map 4), and Land Status (Map 5). The Opportunities and Constraints map (Map 6) is a synthesis of these inventory maps. All of these maps and their information are discussed below. All of these maps are available separately in blue-line from the Department of Community Planning. As indicated in the following text, Maps 4 and 5 as well as the Map of Eagle River Greenbelt have been included in this Plan.

A. GEOMORPHOLOGY

Eagle River is the Municipality's largest river running approximately 41 miles from its source at Eagle Glacier in a northwesterly direction to its mouth on Knik Arm. It is the middle 18-mile portion that is the study area for this greenbelt plan. The upstream 14-mile segment is within Chugach State Park while the downstream 9-mile segment is within the Fort Richardson military reservation.

Within this middle portion, Eagle River valley is overall a typical, glacier-carved valley. Glaciers advanced and retreated within the valley several times during the last million years, carving the exposed, metamorphic bedrock of the valley walls and depositing unconsolidated materials such as sand, gravel and till over lowland sedimentary rocks. As the Valley glacier withdrew, meltwater streams deposited sands and gravels while silts and clays were carried in suspension to be deposited in slackwater areas as sloughs or during floods. The creation of oxbow lakes, natural levees and other features of a low gradient, high sediment load stream valley point to a continuing process of erosion,

deposition and reworking of these deposits by Eagle River and its tributaries. Thus, today the upstream portion of the study area is characterized by a braided channel, riverine terrace wetlands, and an extensive, broad floodplain. Approximately from the South Fork confluence to the Eagle River State Campground the river enters a more confined channel, marked by steeper slopes which rise on the north to residential development.

1. Slope

Mass wasting processes, the gravity induced movement of earth material (including snow), continue to shape the valley. Where slopes steepen and the unconsolidated sediments become unstable, mass wasting accelerates. Slopes vary from nearly flat to gentle slopes along the valley floor, rapidly steepening to very steep slopes (45-100% or more) along the valley walls and as bluffs and cutbanks along the lower river.

Landslides and rockfalls ranging in size from minor slumps to massive slides involving millions of cubic yards of soil and rock, occur in many of the steeper sloped areas of the valley. Avalanche hazard zones have been identified on both sides of Eagle River valley with known avalanche paths extending to Eagle River Road on the north side in several locations. Many of the snow avalanche paths are also paths for rockslides.

The potential for mudflows also exists in the valley, particularly in steep gullies and former stream beds during spring breakup or during heavy summer rains. Seismically induced ground failure ranges from low to moderately low susceptibility throughout the valley with generally higher intensities and longer periods of ground shaking than elsewhere.

2. Soils

The soils of Eagle River valley are formed by a variety of processes; the erosive effects of glacial ice and stream waters; through deposition as sediments are carried by glacial ice and meltwater to settle in lakes, ponds and streams; by accumulation of downslope slumping or creep, landslides, rockslides and avalanches and by weatherization processes such as freeze-thaw, ice-wedging, minor oxidation and hydration. Through these processes, a complex assemblage of soils comprised of 14 soils series and 34 soils types is found in the valley.

Silt and sandy loams comprise the majority of the valley bottom, interspersed with riverwash and areas of poorly drained peats. At the river's edge, mineral soils are derived from repeated flooding which deposits silt. Often, organic layers from streamside vegetation are repeatedly buried. At a later date, with stream channel relocation, the flooding frequency is reduced, allowing for uninterrupted soils development and accompanying changes in the associated plant life.

B. VISUAL CHARACTER

The visual character of Eagle River valley can be defined by glaciated mountains, sweeping views up and down the valley mixed with narrow glimpses of the river and Eagle Glacier. A major visual element within the valley is Eagle River itself. Meandering down the glacially carved valley floor, Eagle River provides visual focus for the length of the valley. The image of river, in an as yet undisturbed valley floor setting, provides the sense of untouched wilderness associated with this area. Significant visual features have been plotted on the Visual Character map. Special features such as cut river banks, the view shed from the river and from points along Eagle River Road and areas where development is visible from the river are indicated on this map.

Topography and vegetation largely define the visual character within the valley. Steep valley walls and high ridge lines provide a strong sense of enclosure when not obscured by foreground vegetation. From the river, views can be defined by three zones: foreground, middleground, background. Ridgelines are of particular importance for their intrinsic scenic value and high visibility. Development activity on ridgelines is very visible from the valley floor and affects the "wild" character that predominates within the greenbelt study area.

Vegetation in the form of birch, spruce and riparian woods limit views in most areas to internal or narrow "slot views" of distant features. Where openings exist, such as along gravel bars or over bogs, panoramic views may occur either up-valley to Eagle Glacier or down-valley, depending on orientation. Such views are limited, but quite spectacular, and thus valuable within the study area.

The two waterfalls on the South Fork of the Eagle River deserve special mention. A lower waterfall divides around a rocky promontory falling 60 feet or more into a rock studded pool which is frequented by spawning king salmon. This site is clearly visible from either of the downstream bluffs (best seen from the east) and provides an open, magnificent scene more grand than the enclosed setting of Thunderbird Falls, a popular park feature located north of Eagle River along Thunderbird Creek. The unique beauty of this area is augmented by the contrasting upper falls where water cascades in a natural flume through a narrow, rock cliff gorge approximately 100 feet in depth and 300 feet or so in length. No other coupled waterfalls site like this exists within the Municipality.

C. VEGETATION

Six vegetation types have been mapped in Eagle River valley, coniferous, deciduous, mixed, forested bog, brush and open bog. Vegetative patterns largely reflect the amount of moisture in the soil. The first three categories, coniferous, deciduous and mixed are generally found on well drained soils, whereas the remaining three are associated with poorly drained soils and high water tables. The vegetation types have been defined as follows:

Coniferous - Consists of a predominant stand of white spruce, usually with an understory of wild rose, alder and willow. Associated trees are paper birch and balsam poplar.

Deciduous - Primarily birch, black cottonwood, quaking aspen and several species of alder and willow. Occasionally, white and black spruce are intermixed with deciduous vegetation.

Mixed - Composed of white or black spruce, birch, poplar, alder, cottonwood and conifers which appear regularly or in patches. Understory species include rose, grasses, devil's club and ferns.

Brush - Consists of shrub thickets and scattered trees. Dense alder thickets occur in floodplains, along waterways and on disturbed sites. A number of herbs and shrubs are associated including devil's club, Red-Osier Dogwood, willows and blueberries.

Forested Bog - Consists of black spruce growing in poorly drained wetlands. The trees are very slow growing and often appear stunted. A pure stand of tightly bunched, short-branched trees is characteristic of the wetland areas.

Open Bog - Occur in low-lying wet areas too waterlogged for trees. The vegetation is predominantly sphagnum moss and low shrubs, with sedges, rushes and cottongrass. Common species are bog rosemary, labrador tea, shrub willows and bog cranberries.

The pattern of ecological succession in the "bottomland" of Eagle River valley is controlled by flooding frequency, stream channel changes and other abiotic factors. As plants take hold, biotic factors become increasingly important. A typical succession sequence would start with a gravel bar flooded annually with successive depositions of silt. As this material builds up over time, grasses and then willow and alder would begin to be found as flooding frequency diminished. Alders leading to poplars, which in turn give way to spruce, would maintain this development as the flooding frequency approaches a once-in-100 years-event and the time interval from the gravel bar stage becomes 100 years. Typically, the spruce dominated woods are found 3-4 feet above the river channel and as one moves toward the gravel bar, the early successional patterns are encountered at lower elevations.

D. WILDLIFE HABITAT

The Eagle River valley provides important wildlife habitat as a largely untouched corridor from the alpine meadows within Chugach State Park to the tidal flats of Knik Arm. This valley is significant to the larger mammals (such as moose, brown and black bear and wolves) as well as populations of smaller mammals (such as beaver, muskrat, lynx, marten, mink, weasel, red fox, coyote, snowshoe hare, arctic ground squirrel, porcupine, hoary marmot and red squirrel and possibly land otter). Red, silver, chum, pink and king salmon spawn in Eagle River. Rainbow and Dolly Varden trout are also present. Additionally, a variety of birds have been observed in the Eagle River region including, but not limited to:

Mallard	Gyrfalcon
Pintail	Willow ptarmigan
Green-winged teal	Rock ptarmigan
Common snipe	Spruce grouse
Spotted sandpiper	Sandhill crane
Rough-legged hawk	Greater yellowlegs

Bald eagle
Golden eagle
Marsh hawk
Osprey
Peregrine falcon

Greater scaup
Mew gull
Gray jay
Magpie

While moose roam the entire valley throughout the year, in winter they are more likely encountered where abundant food, such as willow, is found. These areas are depicted on the map as preferred moose habitat. In the upper valley "channel island" area adjacent to Chugach State Park, several preferred moose habitat areas are found. In this same area, wolves, bear, and migrating sandhill cranes, among other species, appear to be more abundant.

The presence of top-of-the-food-chain predators (e.g., bear and wolves), as well as the diversity of plant and animal wildlife, attest to the richness and vitality of this river valley ecosystem. Preservation and protection of habitat afforded by the Greenbelt is critical to maintenance of this diversity. Thus, the protection of such a river corridor and particularly the more primitive focus for the upper valley (see Section IV E.) will do much to sustain viable wildlife populations and contribute to the uniqueness of the Greenbelt.

E. WETLANDS AND FLOODPLAIN

1. Wetlands

The vast majority of Eagle River valley bottomlands have been designated as wetlands or lands affected by "Waters of the United States", as defined by Section 404 of the 1977 Clean Water Act, such as bogs, marshes, wet tundra and other lands that are periodically or permanently covered by water or that support plants which often grow in wet areas. Four different wetland types have been identified in the Eagle River Valley including; riverine terrace, non-patterned elongated complex, unforested closed bog and forested closed bog or swamp. The riverine terrace wetland type is by far the most extensive in acreage and exhibits a great deal of variability in terms of the plant communities present (e.g. from sedge tussocks in ponded water to white spruce woodlands). The dominant vegetation in this wetland type is, however, low shrub or low forest bog interspersed with wet meadows and marshes.

Wetlands within the study area have been mapped, evaluated and classified within five designations: Preservation, Conservation, Development, Mixed Development and Unclassified. In keeping with the intent of the Anchorage Wetlands Management Plan, the 100-year floodplain was used to distinguish between preservation and conservation wetlands. Within the 100-year floodplain, preservation wetlands were identified while the adjacent wetlands above that flood elevation were identified as conservation. The other wetland categories stood on their own. Approximately 3000 acres of wetlands exist within Eagle River Valley. Of that total, over half is classified as preservation (1640 acres) and over 40 percent as conservation (1165 acres). The remaining three classifications comprise 120 acres together (mixed development - 60, unclassified - 40, development - 20) (see Map 4).

The wetlands classifications are further described below:

Preservation Wetlands - Wetlands selected for Preservation would be managed or protected through use of appropriate controls to maintain their natural character and function. Uses or activities which would degrade or destroy the natural systems and resources would be prohibited. Uses or activities would be allowed only if they further enhanced, restored or preserved the natural character of the wetlands. Controls on lands or land uses adjoining wetlands would also be necessary to protect hydrologic and habitat functions. Some improvements such as trails, restoration work or park maintenance facilities in adjoining areas or in the wetland would be allowed while the wetlands would generally be maintained in a natural condition.

Conservation Wetlands - These wetlands would be managed in such a way as to conserve their natural functions and values to the maximum practicle extent while permitting certain carefully controlled uses to occur. Development associated with these wetland related values would be permitted, but the natural character of the wetland would be retained, as much as possible. Development within conservation wetlands will be designed to protect significant wetlands values through use of open space. In these instances, the Community Planning Department would work with the land owner/developer to prepare site plans which reserve portions of the wetlands as open space. Submittals for preliminary plats in

Conservation wetlands, [see AMC 21.15.110(c)], are designed to inform both the developer and Municipality which areas are more sensitive and thus better suited for retention as open space.

Mixed or Cluster Development Wetlands - Wetlands where relatively high density development can occur in certain areas to allow for open space in other areas. General permits issued by the Municipality, under delegated authority from the U.S. Army Corps of Engineers, allow wetlands development with incorporation of certain mitigation measures. These measures would be used in those wetlands slated for development in order to preserve, as much as possible, valuable wetland functions.

Developable Wetlands - These wetlands may be developed to satisfy growth needs. General permits issued by the Municipality, under delegated authority from the U.S. Army Corps of Engineers, allow wetlands development with incorporation of certain mitigation measures. These measures would be used in those wetlands slated for development in order to preserve, as much as possible, valuable wetland functions.

Unclassified Wetlands - These wetlands have been determined to be wetlands through current mapping by the Corps of Engineers, but were not classified in the Wetlands Management Plan. Generally, such areas adjacent to the Preservation or Conservation wetlands will take on that classification. Other areas adjacent to Developable wetlands or isolated wetlands will be classified as Developable wetlands. However, Assembly action in amending the plan to classify these wetlands and the Corps' concurrence are required before these designations would be official.

Unlike the Preservation and Conservation wetlands which require Individual permits or the Developable and Mixed Development wetlands covered by General permits, unclassified wetlands may require either an Individual or Nationwide permit. A wetlands determination prepared by the Corps is advised and would provide information on the particular permit path required.

These wetlands are regulated by the U.S. Army Corps of Engineers. Discharges of dredged or fill material into the navigable waters and wetlands associated with other waters of the United States fall under Corps authority. Under this authority, three types of permits are issued for the placement of fill material in wetlands; Individual, General and Nationwide. Within the Municipality of Anchorage, as a result of the Anchorage Wetlands Management Plan, authority has been delegated by the Corps to the Municipality for the issuance of General permits for fill activities in any wetland classified development or mixed development. The Corps still retains its authority for any other proposed wetland fill project. An Individual permit must be obtained for projects proposed in conservation or preservation wetlands and an Individual or Nationwide permit may be required for those wetland areas previously unclassified. The Individual permit process is most exacting and may involve a lengthy review and evaluation by State and Federal resource agencies to insure that the proposed discharge is in the public interest. The General and Nationwide permit process is much less exacting and more swiftly concluded by the Municipality and Corps respectively.

2. Floodplain

The 10, 100 and 1000-year floodplains of Eagle River were determined for the Municipality by the engineering firm, CH₂M Hill, using the Corps of Engineers HEC-2 step backwater computer program, with cross sections scaled from 1978 Municipal topographic maps. Subsequently, the Corps of Engineers, as directed by the Federal Emergency Management Agency with Municipal concurrence, performed an "Approximate Study" of Eagle River, and prepared updated, though preliminary, maps reflecting the most current floodplain information available.

Both studies show that the configuration of Eagle River valley determines width of the 100-Year floodplain. Up-valley, near the Chugach State Park administrative boundary, where the valley is wide and flat, Eagle River winds through the area, branching into side streams. The 100-Year floodplain in this area is wide, with extensive "channel islands" of land located between stream channels and extending above the floodplain. Proceeding down-valley, the width of the 100-Year

floodplain decreases with the narrowing configuration of the river, until Eagle River is restricted to one main channel flowing between steep bluffs. (See Map 4 for detailed information.)

F. WATER QUALITY

By protecting the river corridor, an Eagle River Greenbelt would directly aid in the preservation of water quality. As measured from one bank in the lower valley the Greenbelt reaches its narrowest width at approximately 240'. Thus, the potential for suspended sediments, oil and grease as well as increased turbidity and fecal coliform counts are greatly diminished with the creation of such a buffer. Without development adjacent to the river, the processes of runoff and erosion are much less likely to convey these pollutants to the river. Moreover, distant development should not impair water quality because such pollutants will have been removed through the filtering action of the Greenbelt buffer. Finally, stormwater outfalls into Eagle River should be closely monitored to insure that proper water quality safeguards (e.g. sediment traps, oil/grease separators) are designed, built and adequately maintained. This will be particularly important as subdivisions are developed in the lower valley.

Nevertheless, despite the relatively undeveloped character of the river, two specific water quality concerns have been raised. Violations of the fecal coliform standard have been reported from the Hiland Mountain Correctional Center sewer outfall near the river bank by the picnic area in the Eagle River State Campground. As a result a plan for effluent control is under development which would clean up this discharge water to meet state water quality standards. In an ongoing study, state health officials will monitor and evaluate the extent of fecal coliform pollution throughout the Eagle River drainage basin. Concern has also been raised regarding leachate from the old landfill off Hiland Road draining into Eagle River. Recent tests conducted by the Department of Environmental Conservation have, however, shown that a surface stream draining this old landfill area meets water quality standards including those for organics and heavy metals. However, the Municipality will be monitoring ground water quality from the results of one well in this area and will remain alert to the need for further study of this issue.

G. LAND STATUS

1. Land Use

"When I first built my place in 1959, I could look across the Valley and count nine lights at night."

Rod Delin, Eagle River Valley homesteader on the south side beyond South Fork

Tanaina Indians had long frequented Eagle River Valley prior to European contact, but left no lasting imprint on the landscape according to the Alaska State Archaeologist. As settlement of Eagle River began to accelerate following World War II, homesteaders began to settle on uplands bordering Eagle River Valley. On the north side, Eagle River Road was built linking the new community to the growing number of homesteaders. On the south side, a road ("Homesteaders Road" or the Bureau of Land Management's designation, 1 D9) was created linking homesteaders to the Old Glenn Highway. Sometime later, as Bernard Subdivision and other settlement occurred in the Upper South Fork area, Hiland Drive became the primary access road to the Valley's south side. Yet as this development progressed, the "bottomland" of Eagle River Valley remained largely untouched.

Today, with the exception of a two-mile stretch downstream on the northern end, the predominant developed land use is rural residential. Moreover, this large lot land use pattern with on-site water and wastewater service, is dispersed along either side of Eagle River Road. A similar pattern of dispersal along or adjacent to Hiland Drive occurs on the south side (i.e., Bernard, R&R and Riverview Estates Subdivisions). The exception to this pattern is the detached single family subdivisions served by public water and sewer between Eagle River Road and the bluff bordering Eagle River. Many of the early homesteads still exist, while others have been subdivided. On the south side of the Valley, beyond South Fork, several (less than ten) adjacent intact homesteads may still be found. The land use pattern here is still very much "frontier", a remote, almost inaccessible area located between Chugach State Park to the south and the undeveloped Eklutna, Inc. held valley bottomlands to the north.

Aside from the residential land uses ranging in intensity from suburban to remote homesteads, institutional land use is also found in the Valley. Chugach State Park frames the whole valley at higher elevations both on the north and south sides and, is responsible for the Eagle River Campground which includes area both north and south of Eagle River next to the Glenn Highway. Lion's Park at Eagle River Road and Eagle River Loop Road is one of the few developed parks in the area, providing for needed neighborhood recreational activity on land leased from the State and administered by Chugach State Park. The Hiland Mountain Correctional Center and the Division of Forestry Plant Materials Center are two adjacent state uses located near the Glenn Highway on the southern downstream side. Two new schools have been developed in recent years within the Valley (i.e., Ravenwood Elementary at Ptarmigan and Wren and Gruening Junior High between Lion's Park and Eagleridge Subdivision). Other possible alternative school sites have been identified to serve anticipated future growth. These include possibly three additional elementary sites equally spaced in the upper valley between Eagle River Road and Eagle River. The most downstream of these sites has been identified as either a high school or elementary site. Finally, on the south side, an elementary school site has been identified between the proposed bridge connection and the Glenn Highway, across from Gruening Junior High. This is not to imply that all these school sites will be developed in the near or even distant future. These sites merely indicate the provision for future elementary schools and possibility an additional secondary school.

Recreational use of the land and water in Eagle River Valley is increasing. This increased use has led to land management difficulties for Eklutna, Inc. and several trespass situations. As a result, Eklutna, Inc. has required land use permits to be obtained prior to any use such as canoeing or hiking. While water use and use of the lands still occurs without the required permit from Eklutna Inc., the information summarized in Table 1 provides some documentation of the magnitude of recreational use. As can be seen, the commercial use by rafting (two operators) dominates. However, those with long experience in outdoor recreation in Eagle River Valley believe the actual use of the River and lands could easily be double this reported level when consideration is given to all recreational use (i.e.,

canoeing, kayacking, rafting, skiing, hiking, snowmobiling, equestrian use and dog mushing). The Knik Kanoers and Kayackers, which represents the largest organized recreational use of the river, believes strongly that Eagle River is the most heavily used whitewater stream in the state. Thus, it is clear that recreational use of the valley is high despite the relatively undeveloped nature of facilities for such use.

Table 1
1984 Recorded Recreation Use in
Eagle River Valley

<u>USE</u>	<u>PARTICIPANTS</u>
Rafting	2,024 (Commercial Passengers)
Canoe	65
Canoe & Kayak Slalom Race (Knik Kanoers and Kayakers)	63
Eagle River Triatholon Canoe Portion (Alaska Wilderness School)	40
Dog Mushing	1
Fishermen, Visitors and others noted (frequently concentrated at the South Fork Confluence). This category includes a few bowhunters during September.	100 or more
<hr/>	
TOTAL	approximately 2,300

Source: Land Use Permits issued by Eklutna, Inc.,
1984

2. Population Growth and Land Use Change

During the past several years, population growth within the Municipality of Anchorage has exhibited among the fastest growth rate of cities throughout the United States. This growth has had consequences in terms of land consumption, record housing starts and resulting demands for better roads, more schools and recreation facilities. Growth in Eagle River valley is no exception to this trend. Table 2 sum-

marizes the changes in housing type and population for the three community council areas bordering Eagle River valley (Eagle River, Eagle River Valley and South Fork Community Councils).

TABLE 2
Eagle River Housing and Population
1980 and 1984

	Single-Family Detached	Duplex and Attached Single-Family	Mobile Homes	Multi-Family	Total Housing Units	Resident Population
1980	1,883	123	205	372	2,583	7,528
1984	3,744	398	209	509	4,860	15,320

Sources: 1980 Census Neighborhood Statistics Program, U.S. Census
1984 Housing Survey, Research Section/Municipal Department
of Community Planning

While the population for the Municipality as a whole grew from over 174,000 in 1980 to over 244,000 in 1984, the Eagle River population more than doubled. Moreover, while average household size was increasing throughout the Municipality during this period, average household size grew more quickly in Eagle River valley to a higher level (approximately 3.07 people/household in 1983 for the valley compared to 2.87 for the Municipality). In 1983, nearly one-third of all Municipal households were comprised of a couple with children. In the larger Eagle River/Chugiak area in 1983, nearly half of all households could be so described, the highest proportion of any area within the Municipality.

The Land Status Map (see Map 5) depicts the location of existing and impending subdivisions. As is evident from existing development and zoning limitations, the downstream portion of Eagle River valley (i.e., from the Glenn Highway bridge to the South Fork confluence or Sheet 1 of Map 5) will continue to be the focus for higher, more urban residential densities. This area is characterized by the existing Eagleridge and Eaglewood Subdivisions. A preliminary plat has been filed for Parkview Terrace East which would add 270 homes. Moreover, Phases 2 and 3 of Parkview Terrace East Subdivision could add an additional 1,000 dwelling units whenever a plat for that area is submitted and approved. Finally, the remaining undeveloped section of Eaglewood could

add approximately 100 dwelling units upon subdivision. Thus, given the current average household size, a near-term population growth of some 4,100 people on the north side of the lower valley is likely. Given the zoning permitting higher densities, proximity of arterial access, water and sewer services, as well as a developed park (Lion's Park) and two adjacent schools (Ravenwood Elementary and Gruening Junior High) growth in this lower valley area will likely continue until all developable land is used.

While the downstream, southern side of the valley has been largely undeveloped, except along Hiland Drive (also known as Stewart Drive), this pattern may soon change. The bridge across Eagle River connecting Eagle River Road and Hiland Drive will provide the necessary sewer and water service to allow for suburban single family dwellings now permitted under the R-1A zone. Perhaps as many as 684 dwellings could be built in this particular area amounting to a south side, lower valley growth potential of some 2,000 people.

Further upstream, all on the northern side, eight subdivisions with preliminary plat approval have been filed. With lot requirements of existing zoning, perhaps only 60 housing units could be built. The south side is much less settled and more remote; as a result, it is experiencing less growth than even the upstream north side. With the pattern of land ownership in the valley and particularly on the south side consisting of large land tracts in single ownership, the potential for greatly expanded development does exist. However, the lack of utilities, distance to service connections and poor access, particularly as one moves upstream, point to long-term development prospects.

3. Zoning

Recent areawide rezonings for Eagle River valley have resulted in the first identification of a planned community district in advance of any project plans. Areas within this district, particularly at the lower valley end may not be such long term development prospects, however. In any event, the detailed plan review requirements of this district will provide information on the quality, quantity, and timing of such development.

TABLE 3
ZONING DISTRICTS AND THOSE SPECIAL LIMITATIONS
RELATED TO EAGLE RIVER GREENBELT PROTECTION

Eagle River Valley adjacent to Eagle River	ZONING DISTRICT						
	R-1A (SL)	Planned Community	R-3 (SL ²)	R-6 (SL ¹)	R-6 (SL ²)	R-10 (SL ¹)	R-10 (SL ²)
NORTH SIDE	<ul style="list-style-type: none"> ◦ Dedicated 75' Greenbelt ◦ Density limit 	<ul style="list-style-type: none"> ◦ Master Development and Development Area Plan review 	<ul style="list-style-type: none"> ◦ Prohibited development area between Eagle River and Trail Corridor with 150' setback north of corridor ◦ Non-development of lands in excess of 30% slope ◦ 65' vegetative buffer ◦ Density Limit ◦ Transitioning/ Buffering 	----	----	----	----
SOUTH SIDE	<ul style="list-style-type: none"> ◦ Site Plan review for protection of slopes in excess of 25% and flood plains as well as the provision of transition space 	<ul style="list-style-type: none"> ◦ Master Development and Development Area Plan review (limited on south side to residential and/or public institutional use) 	----	<ul style="list-style-type: none"> ◦ Design measures to protect vegetative fringe of Eagle River and ensure minimal flood plain disturbance 	<ul style="list-style-type: none"> ◦ Same as R-6(SL¹) ◦ 75' setback from South Fork 	<ul style="list-style-type: none"> ◦ Density limit 	<ul style="list-style-type: none"> ◦ Density limit ◦ 75' setback from South Fork

Zoning districts bordering Eagle River and their pertinent features related to protection of the Eagle River Greenbelt are detailed in Table 3. The Regulatory measures associated with the zoning districts are based upon features such as slope or special limitations related to greenbelt protection or recreation. Land within these zoning districts is undeveloped at present and represents virtually all of the area encompassed by the proposed greenbelt. Thus, these controls, unlike floodplain regulations or wetlands permitting, are yet to be used in guiding development.

As is evident from Table 3, the controls imposed by these districts vary greatly. In general, the more intensely developed portion of the valley is downstream, adjacent to the existing Eagleridge and Eaglewood Subdivisions. This pattern was continued in the rezoning action. Thus, the R-3 (SL) adjacent to these existing, large developments has several specific controls which should serve to protect and maintain a Greenbelt along the river to accommodate a trail corridor. On the south side, the correlation between higher residential densities and increased controls is again maintained in the downstream end with the R-1A (SL). Most of the land bordering the Greenbelt will, however, be subject to lower density development and controlled either by the detailed plan review required for the Planned Community District (predominantly on the north side) or the much less stringent R-6 limitations and simple plat review on the south side.

4. Land Ownership

The Eagle River valley "bottomlands" have remained undeveloped and used for recreation for decades due largely to the ownership history for this area. In 1925, federal land managers withdrew much of the Eagle River valley from land disposal for possible future use in hydropower projects. While settlement occurred along the margins of this land withdrawal following World War II, no development was permitted in the federal power reserve withdrawal. Those lands now identified for the Greenbelt were wholly within this reserve and were, in fact, managed by the Bureau of Land Management (BLM) as an area of open space which allowed for the continuation of recreational use. In 1970, Chugach State Park was created by the State Legislature with boundaries incorporating these reserve lands. Management agreements were forged between the State Division of

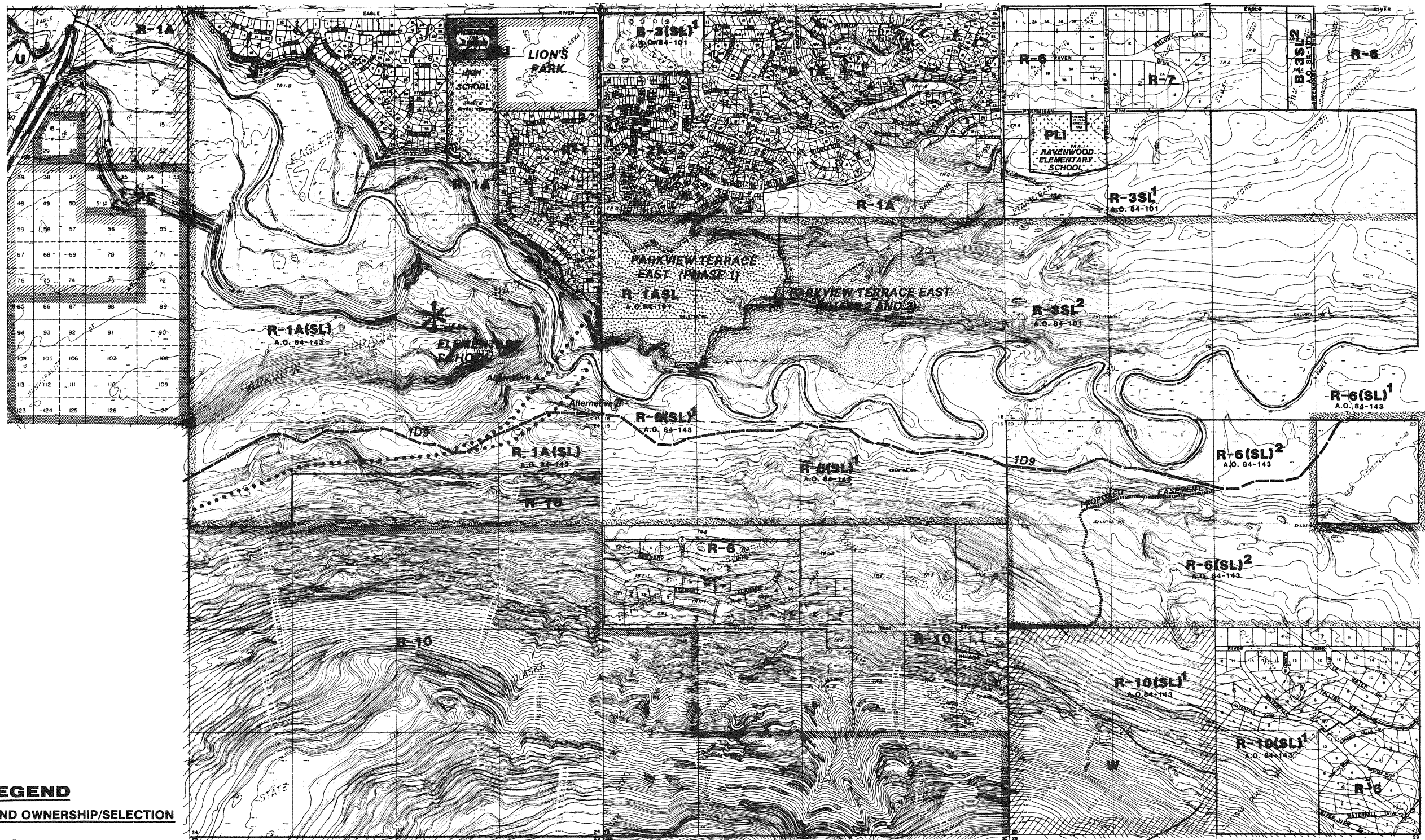
Parks and Outdoor Recreation and other state agencies as well as BLM permitting Chugach State Park to exercise management authority over the federal power reserve lands (up to the 500' elevation) and the State Mental Health and University Trust Lands as well. Thus, the use and management of these lands for recreational purposes was reinforced.

With the passage of the Alaska Native Claims Settlement Act in 1971 to Eklutna Village corporation was formed entitling it to ownership of a certain land base which it would manage for the benefit of its shareholders. Eklutna, Inc. subsequently selected these valley "bottomlands" and in 1979 received patent to these lands (see Land Status Map 5). Eklutna, Inc. has continued the management of these lands for open space and recreation. Thus the view that Greenbelt lands should be protected as open space for recreational use has a strong historical precedent.

Given the state ownership of the Greenbelt's two "anchors", the Eagle River Campground and the Eagle River Visitor Center both administered as part of Chugach State Park, the intervening land is all privately held along Eagle River (see Table 4). As previously indicated, this is remote, undeveloped, virtually inaccessible and contains approximately 2,730 acres of conservation and preservation wetlands. Fully 95 percent of the Eagle River Greenbelt would be located on land currently owned and managed by Eklutna, Inc.

Three other private landowners own land proposed as either Greenbelt land and/or recreation site. CBS Real Estate owns 75 acres in the mid-valley area. The Bear family owns 12 acres in the lower valley of both Greenbelt land and the southwest portion of the South Fork Park site. Barbara Gross owns 19 acres of the South Fork Waterfalls site bordering the lower waterfalls. Finally, the state owns 77 acres within the Eagle River Campground and South Fork Waterfalls sites while the Municipality owns 22 acres of Greenbelt lands in the lower valley. (see Land Status Map 5 and Table 4).

Ownership of four other land parcels within the Greenbelt (those owned by Lee, Donnelly, Eklund and Carr; see Land Status Map 5 and Table 4) is in dispute. One other parcel outside the Greenbelt is also in disputed ownership. Though all the disputed land is patented to Eklutna, Inc., this



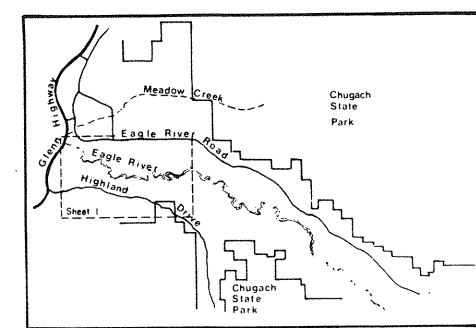
LEGEND

LAND OWNERSHIP/SELECTION

State	
Chugach State Park (Patented Except Where Otherwise Indicated)	
Other State Lands	
Municipal	
Municipal Ownership	
Municipal Land Selection (State Ownership)	
Developed School	
Alternative School Site (Elementary and/or High School)	

Private	
Eklutna, Inc. (All Patented Lands)	
Other Private Lands	
Preliminary Plat (Subdivision Name Indicated)	
Pending Development (No Platting Board Action as Yet)	
Land Ownership Disputes (Litigation Reference)	

OTHER	
Eagle River Road/Hiland Drive Connection/Bridge (proposed)	
Zoning Boundaries	
Zoning Designation	R-3 (etc.)
Existing Public Use Easement (60' wide), (known as 1 D9)	
Proposed Easement to Join 1 D9	



DATE: November 1984
SCALE: 1" = 1400'

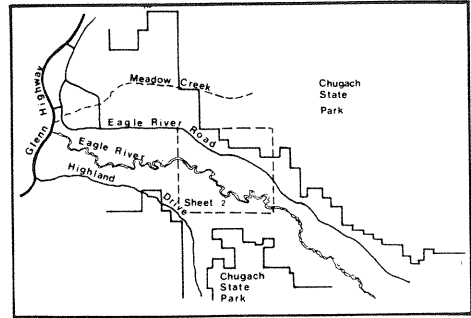
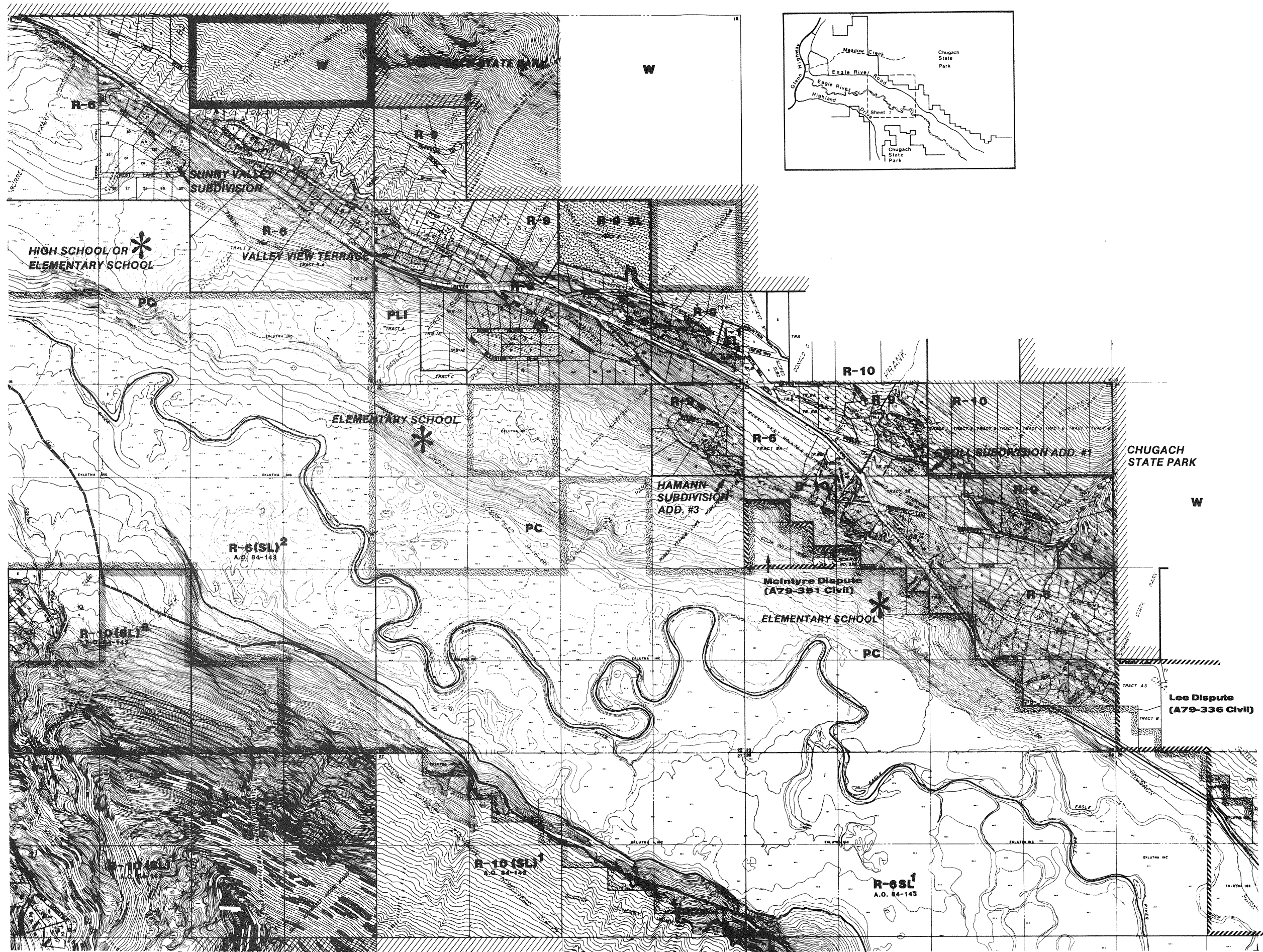
TRA/Fair
ARCHITECTURE ENGINEERING PLANNING INTERIORS
1001 E. BENSON BLVD., ANCHORAGE, AK 99508 (907) 277-2641

PROJECT TITLE
EAGLE RIVER GREENBELT PLAN

SOURCES:
M.O.A., Department of Community Planning
Submission File; summer, 1984.
Consultation with Alaska Department of
Natural Resources; summer, 1984.
with Estilme, Inc.; summer
and fall, 1984.

Land Status Map #

SHEET NO. **1**
OF **4** SHEETS
IN THIS CATEGORY.



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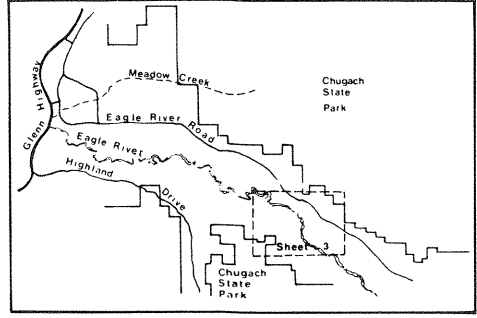
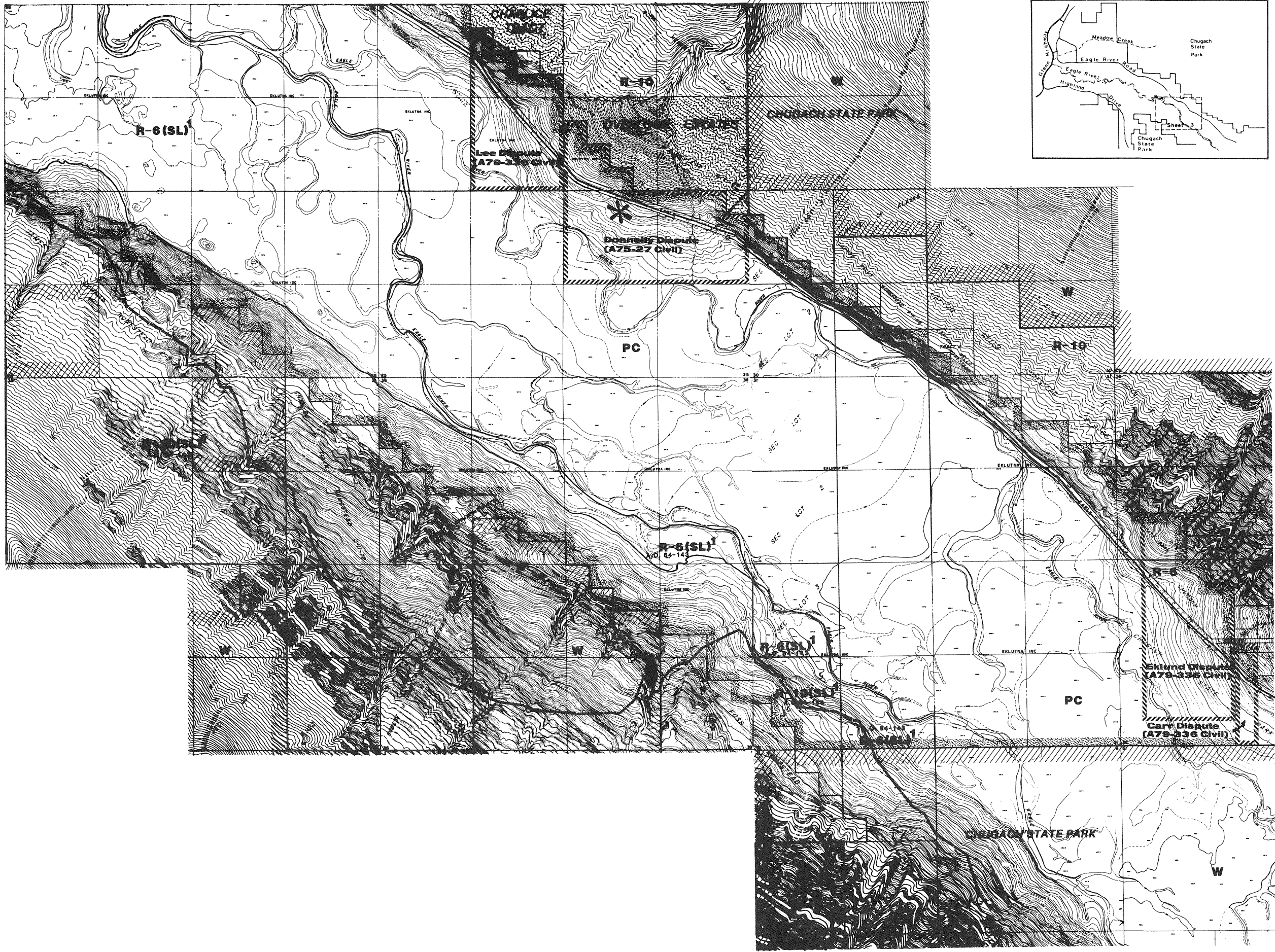


PROJECT TITLE
**EAGLE RIVER
GREENBELT PLAN**

SOURCES:
M.O.A., Department of Community Planning
Subdivision Files; summer, 1984.
Consultation with Alaska Department of
Conservation with Eklutna, Inc., summer
and fall, 1984.

**Land Status
Map 5**

SHEET NO. **2**
4 SHEETS
COPY



SHEET NO.

3

OF 4 SHEETS

IN THIS CATEGORY

**Land Status
Map 5**

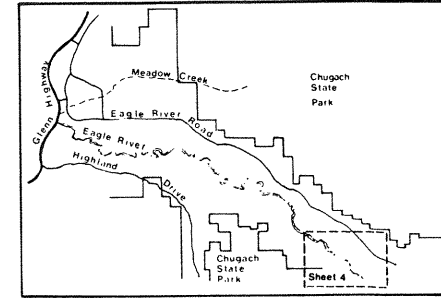
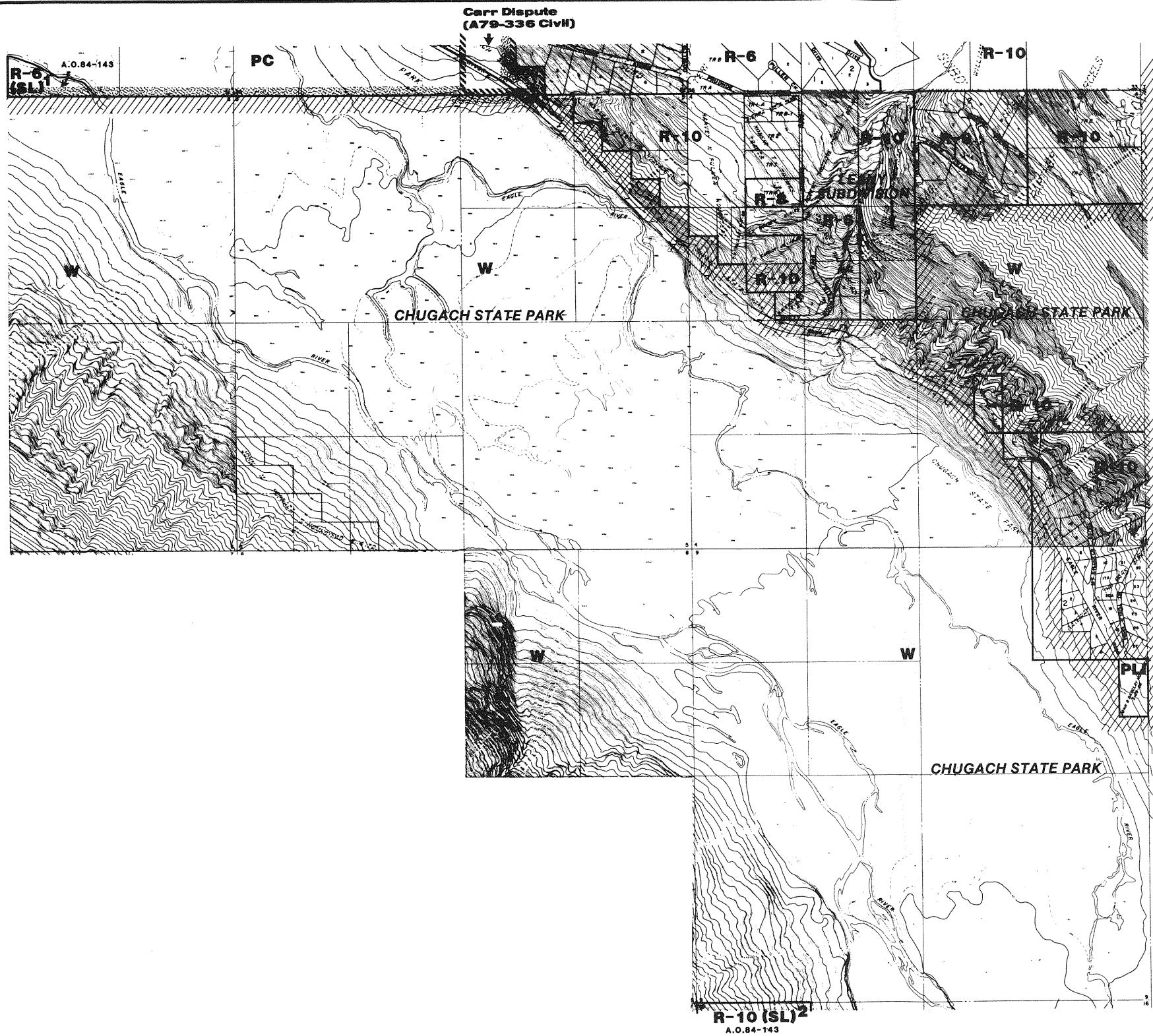
SOURCES:
M.O.A. Department of Community Planning
Subdivision Files; summer, 1984.
Consultation with Alaska Department of
Natural Resources; summer, 1984.
Consultation with Eklund, Inc.; summer
and fall, 1984.

PROJECT TITLE
**EAGLE RIVER
GREENBELT PLAN**



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ARCHITECTURE ENGINEERING PLANNING INTERIORS
1001 E. BENSON BLVD., ANCHORAGE, AK 99508 (907) 277-2641

DATE: November 1984
SCALE: 1" = 1400'



NOTE:
 Township 13N, 11E, S.M. has been selected by the State of Alaska, and has been designated for inclusion in Chugach State Park excluding valid rights. The indicated Park area is the best information available on State Park boundaries until a patent is issued by the Federal government.

DATE: November 1994
 APPROX. SCALE: 1" = 1400'

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 1001 E. BENSON BLVD., ANCHORAGE, AK 99508 (907) 277-2641



PROJECT TITLE
**EAGLE RIVER
 GREENBELT PLAN**

**Land Status
 Map 5**

SHEET NO.
4
 OF 4 SHEETS
 IN THIS CATEGORY

issue is under litigation at present and would cloud acquisition and development of land for the Greenbelt in this area. This is especially significant for development of the Roop Road recreation site (claimed in part by the Lee family) which would provide vehicular access to the river, allowing canoe/kayak put-ins.

Ownership of riverbeds throughout the state is another issue of particular relevance to the Eagle River Greenbelt. Approximately 300 acres of Eagle River riverbed (i.e., the stream channel acreage approximately to the annual high water line) could conceivably be held as state owned land if Eagle River is found to be a navigable waterway. Where traditional patterns of trade and commerce can be documented, the issue of river navigability is clear and the riverbed is held to be state owned land. Simple commercial/recreational use of the river by canoes/ kayaks/rafts as on Eagle River is considered marginal justification for river navigability. When navigability cannot be proven, then private ownership of the riverbed is asserted. The State is awaiting the judicial outcome of several cases where the issue of navigability has been raised. If navigability is interpreted broadly, the State may press its claim and challenge the validity of patent conveyance to Eklutna, Inc. for the Eagle River riverbed (the river water itself is already viewed as a state-owned resource). Such a challenge, if upheld, would mean that the acquisition of about 8% of Eklutna's "lands" would be unnecessary.

Given the existing and anticipated pattern of development, the Valley downstream will continue as the focus for residential growth. Demand for more improved roads, developed parks/recreational activities and school development will be greatest in this area. This reality will be reflected in the priorities for greenbelt development following acquisition. Conversely, those areas experiencing slower growth would receive less intensive greenbelt development. Thus, as Eagle River valley grows, the greenbelt would remain, protecting the river and linking the entire valley with a system of continuous trails on both north and south sides which would be developed in response to the character of development on adjacent uplands.

Table 4
Greenbelt Ownership

Ownership		Approximate Acreage by Greenbelt Category		TOTALS (approx. acreage)
		Lands	Sites	
P R I V A T E	Eklutna Inc.	3747	143	3890
	CBS Real Estate	75	0	75
	Gross	0	19	19
	Bear	4	8	12
D I S P U T E D	Donnelly	65	0	65
	Eklund	44	0	44
	Lee	12	23	35
	Carr	10	0	10
P U B L I C	State	0	77	77
	Municipal	22	0	22
TOTALS		3848	247	4095

NOTE: While Eklutna, Inc. has patent deed to these privately-held, disputed lands, ownership is in litigation (see Land Status Map 5). These lands have been counted as though they were owned by Eklutna, Inc., however.

H. OPPORTUNITIES AND CONSTRAINTS

The information termed Opportunities and Constraints represents a compilation and graphic synthesis of information plotted on the earlier inventory maps, as well as slope, avalanche information and known potential recreational opportunities. Because of the undeveloped, wild character of so much of the valley, opportunities for development of recreational facilities, preservation of open space and enjoyment of wildlife abound. The greatest constraint is the steep, unstable slopes adjacent to the river downstream which will require wide detours for trail location. This was particularly troublesome for siting those trail segments near Eagleridge and Park View Terrace Subdivisions.

IV. EAGLE RIVER GREENBELT PLAN

A. INTRODUCTION

The proposed Eagle River Greenbelt Plan is based on two primary objectives, to provide the opportunity for continuous recreational access to Eagle River, and to conserve open space in the valley bottom for wildlife habitat and watershed values.

The study area is defined as that portion of Eagle River valley classified as wetlands and/or lying within the 100-Year floodplain, as well as bordering upland areas needed for trail location wildlife habitat or recreation sites. The study area extends from the Glenn Highway bridge-crossing to the administrative boundary of Chugach State Park (bordering Eklutna lands) in the upper portion of the valley. That portion of South Fork of the Eagle River extending upstream to the upper falls was also included. An inventory for the project was researched and compiled based on existing plans, background literature and existing maps and aerial photographs (see Inventory section). Published data was supplemented through knowledgeable individuals and field verification. (See "Sources" for a detailed list.)

Several plans have been prepared in the last five years which explicitly involve the Eagle River valley. The relationship of this plan to the Anchorage Coastal Management Plan is treated separately (see Section IV-G). The other plans are briefly described below. In all cases, the Eagle River Greenbelt Plan is both consistent and serves as a refinement of these predecessor plans. The Eagle River-Chugiak-Eklutna Comprehensive Plan (1979) has classified most of the Greenbelt area as Marginal Lands with smaller areas at the periphery as residential or alpine and slope affected land. This plan recognized the special character of Eagle River valley in its assemblage of environmentally-sensitive lands (i.e., floodplain, wetlands, areas of slope instability and critical wildlife habitat) and called for very selective development of these areas if at all. The Chugach State Park Master Plan (1980) identified the recreational use of the valley and called for the establishment of six sites along the river providing for vehicular access. The Southcentral Region Plan Recommendations (1983) of the Division of Parks and Outdoor Recreation specify working with both Eklutna, Inc. and the U.S. Army to maintain river travel and access to Eagle River under Special Management

Considerations. Finally, the Eagle River-Chugiak-Eklutna Parks, Greenbelts and Trails Plan (1985) identified the need for an Eagle River Greenbelt and acknowledged that its recommendations regarding such a Greenbelt would be superseded by this present plan.

The plan development task was initially seen as a linear process leading from inventory to opportunities/constraints and on to plan alternatives from which a recommended plan would emerge. As part of the opportunities/constraints analysis, development conflicts, as well as environmental sensitivity and suitability were to be evaluated. As work proceeded, however, this process was modified because its "straight-line" nature was ill-suited to the problem at hand. For example, it became clear that the real value of the inventory work was largely in its reference aspects. From the wetlands and floodplain information (Map 4), graphic overlays were made which were very helpful in later plan modification work. Moreover, because of the homogeneity of much of the valley bottomland, the suitability analysis failed to differentiate much of the valley bottom. Conflicts culled from the inventory phase such as avalanche hazard zones and steep slopes were identified along with special features and opportunities. However, the Opportunities and Constraints analysis essentially stood on its own as a synthesis of most of the foregoing inventory work.

In effect, the inventory and analysis phase became somewhat uncoupled from the later plan development phase. The drafting of plan alternatives and their subsequent modifications, based on staff and public review, keyed much more on overall acreage and its quality (i.e., wetlands and if so, how classified). Equally important for plan development were trail corridor locations and the needed Greenbelt buffer surrounding the corridor, given adjacent site conditions as well as site suitability for vehicular access and recreational development.

B. GREENBELT ALTERNATIVES

Once an analysis of the opportunities and constraints for establishment of a greenbelt was completed for the entire valley, a series of three alternatives was developed during the period August-November 1984, identifying potential greenbelt boundaries requiring various levels of Municipal commitment. A final alternative, now termed the Recommended Greenbelt was developed following the Public Hearing before the Planning and Zoning Commission, January 28, 1985.

1. Alternative 1

The first alternative incorporated some 2500 acres including all land located within the 100-Year floodplain, plus most of the Conservation wetlands located within Eagle River Valley bottomlands. Potential trail corridors were identified that would allow a continuous trail along either side of the river along the entire length of the Greenbelt. However, in the interest of minimizing potential development costs for trail construction, trail corridors were tentatively located along existing foot and jeep trails. This resulted in entering and leaving the greenbelt, in some cases varying outside the greenbelt boundary by several hundred feet.

Included within the first greenbelt alternative were five of the recreational sites originally identified as potential recreation sites within the North Anchorage Land Agreement. Much of the greenbelt in this alternative is inaccessible to the public due to the location of the majority of trails along the perimeter or outside the greenbelt boundary; trails were located in this manner to reduce trail development costs.

This first alternative was presented to the Eagle River Park Board at an informational public meeting on August 20, 1984. The meeting was well attended by representatives of various river and trail user groups, and Eagle River valley residents. The public comment was supportive of the area recommended to be included within the greenbelt, and there was considerable discussion regarding the need to involve users in the development of a management plan. That plan would allow users to participate in decisions about specific facilities to be developed, and portions of the trail system that would be designated for each user group.

The Eagle River Park Board felt the first alternative needed further development to reduce the greenbelt size and lower potential acquisition costs. They also asked that trail alignments be studied in greater detail with the objective of continuing as much of the trail corridor as possible within greenbelt boundaries.

2. Alternative 2

Based on Park Board and public comments, a second greenbelt alternative was developed that significantly reduced the greenbelt acreage to approximately 1,700 acres, excluding virtually all of the Conservation wetlands and sizable portions of the Preservation wetlands that were not directly needed to support the location and development of the system of trails and recreational sites. Virtually the entire trail system was realigned within the greenbelt boundary based on additional field study.

The second alternative maintained a greenbelt boundary sufficient to include the main trail corridors paralleling the river on both the north and south sides of the valley. Greenbelt boundary widths of 75', 150', and 200' from one side of the river channel were included dependent on surrounding land characteristics and classification to protect trail corridors. The primary objective of the second greenbelt alternative was to accommodate continuous recreational access adjacent to the river along the length of the valley. While it was recognized that protection of wildlife habitat is an important public objective, alternative two chose to focus the Municipal commitment to the greenbelt on maximizing recreational access to the river. Meetings were held with the Alaska Division of Parks and Outdoor Recreation, and Alaska Department of Fish and Game to ascertain the potential for State involvement in acquisition of additional lands adjacent to the greenbelt for protection of wildlife habitat values.

The second alternative was again presented to the public in a meeting sponsored by the Eagle River Park Board on October 9, 1984. At the meeting there was substantial public comment that the greenbelt boundary had been reduced too much, and should be increased to give greater consideration to wildlife habitat protection. While it was recognized that trail development costs would increase if trails were to be developed through large wetland tracts, it was felt that these additional costs would be more than offset by the significantly reduced cost of land acquisition relative to the first alternative.

3. Alternative 3

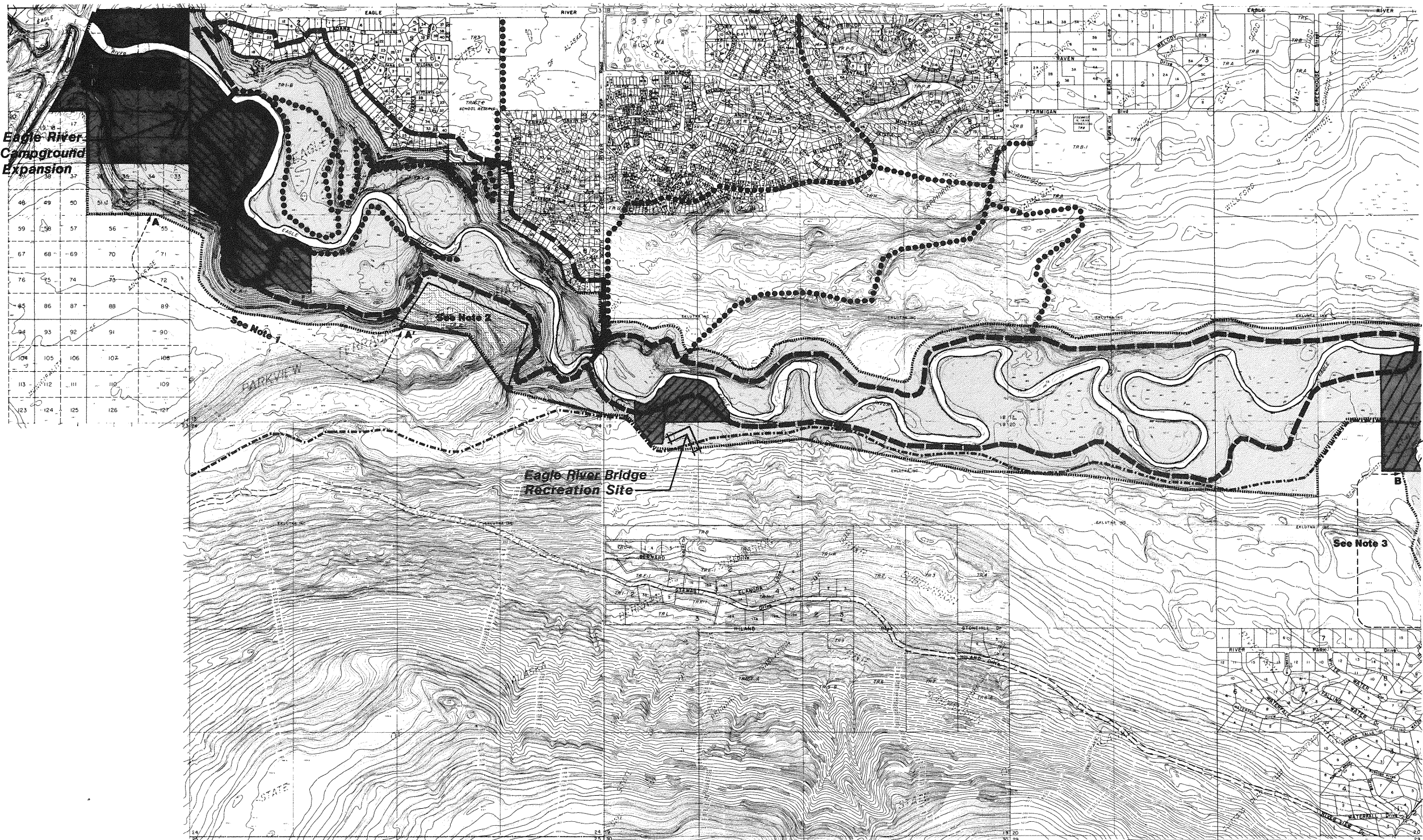
This alternative was developed in response to the public meeting of October 9, 1984. Given concerns

expressed at that meeting, the area designated as Greenbelt was enlarged to encompass some 3700 acres but two types of Greenbelt lands were distinguished, a Core and Fringe area. The Core area was essentially that greenbelt area proposed under Alternative 2 and would be acquired along with the six sites. The Fringe area would however, be closely regulated through existing zoning, platting and permitting authorities to assure that any development would be compatible with the Core Greenbelt. Moreover, acquisition of the Fringe was not ruled out especially those areas of preferred moose habitat in the channel islands. Upon public hearing before the Planning and Zoning Commission January 28, 1985, the desire for greater acquisition of Greenbelt area was again expressed along with the preference for acquisition first, development later.

C. RECOMMENDED GREENBELT (Alternative 4)

The recommended Greenbelt is identified in the accompanying map and includes the lands, sites and trails depicted therein. The approximate acreages for the Greenbelt are listed in Table 5. This recommended Greenbelt derives from the concerns expressed this past fall and at the Planning and Zoning Commission Public Hearing on this Plan in January. Emphatically expressed was a desire for maximum protection of the Valley's unique recreational and wildlife resources. Thus, this fourth and recommended alternative identifies the maximum Greenbelt area among the previous alternatives. All land now identified as Greenbelt is land to be acquired for that purpose. Large intact areas of wildlife habitat would thereby come under protection while recreational use is generously accommodated. Given present trends in recreational demand and residential growth, this alternative is recommended as the Eagle River Greenbelt because it will best attain these objectives.

Consequently, the Greenbelt is viewed as a 4100 acre whole. Within this large acreage, 247 acres of recreational sites would be eventually developed, allowing for vehicular access and serving as origin and destination points. Between these sites, the Greenbelt will accommodate a continuous trail system and large intact areas of wildlife habitat, particularly those areas related to critical winter range. Especially valued in this latter category are the preferred moose habitat areas in the upper valley (see Greenbelt Map and Section III D.) Of the nearly 4100 acre Greenbelt, the State currently has developed its 62 acre Eagle



Eagle River Campground Expansion

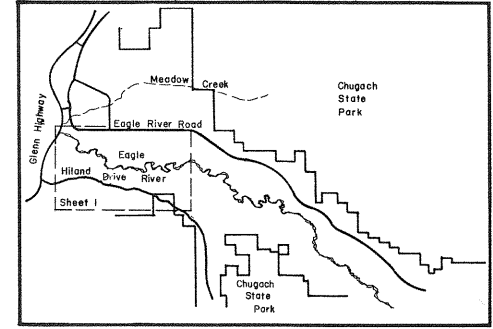
Eagle River Bridge Recreation Site

See Note 3

LEGEND

FEATURE	KEY
Trails	
Main Trail	—●—●—●—●—
Route	—●—●—●—●—
Connecting Trails	●●●●●
1 D9 ("Homesteaders Road")	—●—●—●—●—
Lands	
Greenbelt	▨▨▨▨▨▨▨▨▨▨
Possible School Site	▨▨▨▨▨▨▨▨▨▨
Preferred Moose Habitat	▨▨▨▨▨▨▨▨▨▨
Sites	
Municipal Acquisition	▨▨▨▨▨▨▨▨▨▨
State Acquisition	▨▨▨▨▨▨▨▨▨▨
Currently Developed	▨▨▨▨▨▨▨▨▨▨

- Notes:**
- 75' buffer from bluff's edge along A to A' (see text).
 - Possible school site. Greenbelt inclusion would not preclude school site development.
 - 200' buffer along South Fork Eagle River as indicated in B to B' and C to C' (see text).
 - 50' buffer along each bank of unnamed creek as indicated in D to D'.
 - Connecting trails to the Greenbelt should be established at quarter to half mile intervals.



Key

DATE: March, 1985
SCALE: 1" = 1400'

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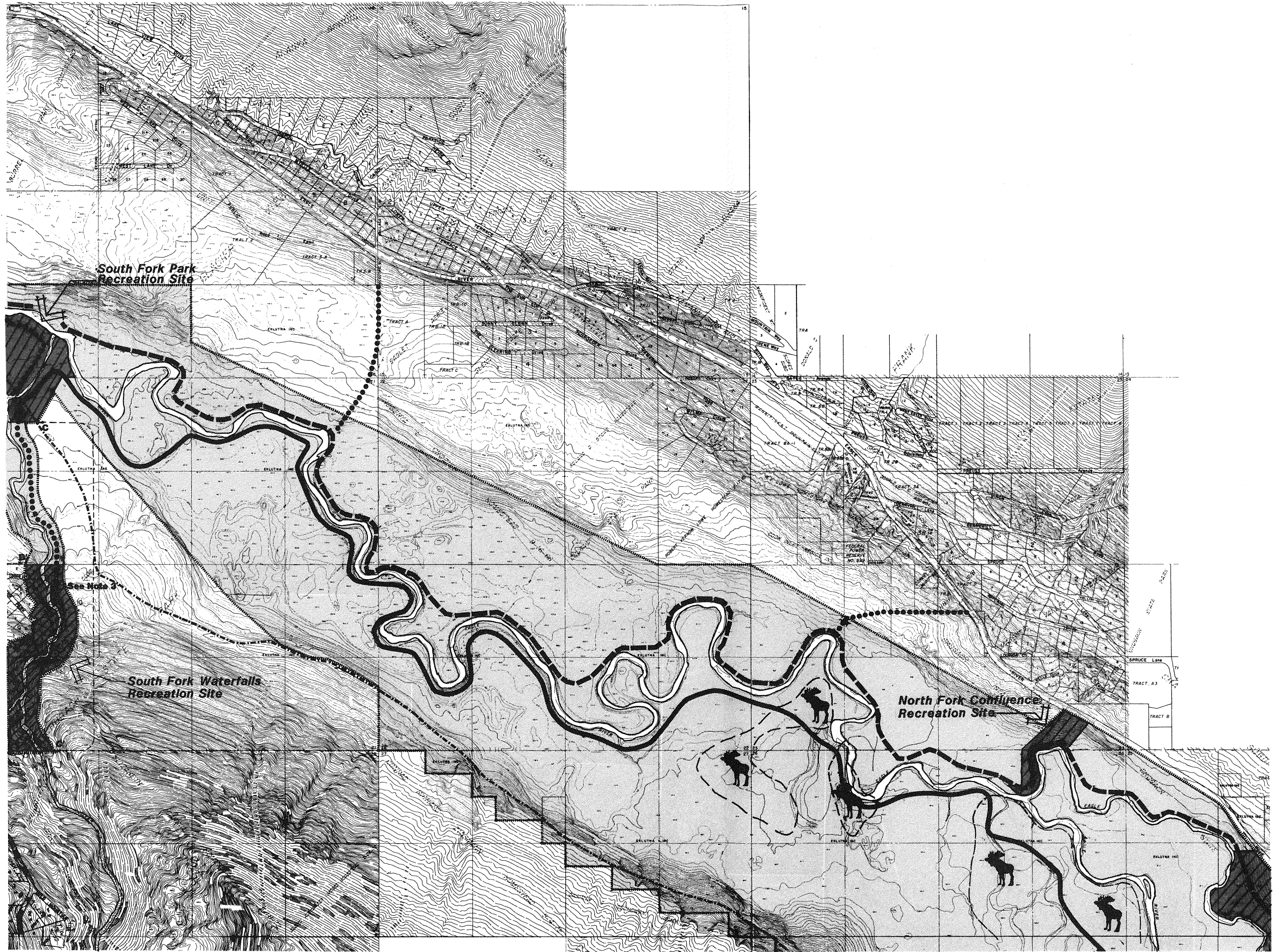


PROJECT TITLE
EAGLE RIVER GREENBELT PLAN

SOURCE: Field map and photographic evaluation: TRAFair Staff; Summer and Fall, 1984.

Eagle River Greenbelt

SHEET NO. **1**
OF 4 SHEETS
IN THIS CATEGORY



SHEET NO.

2

OF 4 SHEETS

IN THIS CATEGORY

SOURCE: Field map and photographic enlargement:
Municipal and TRA/Farr Staff, Summer and
Fall, 1984.

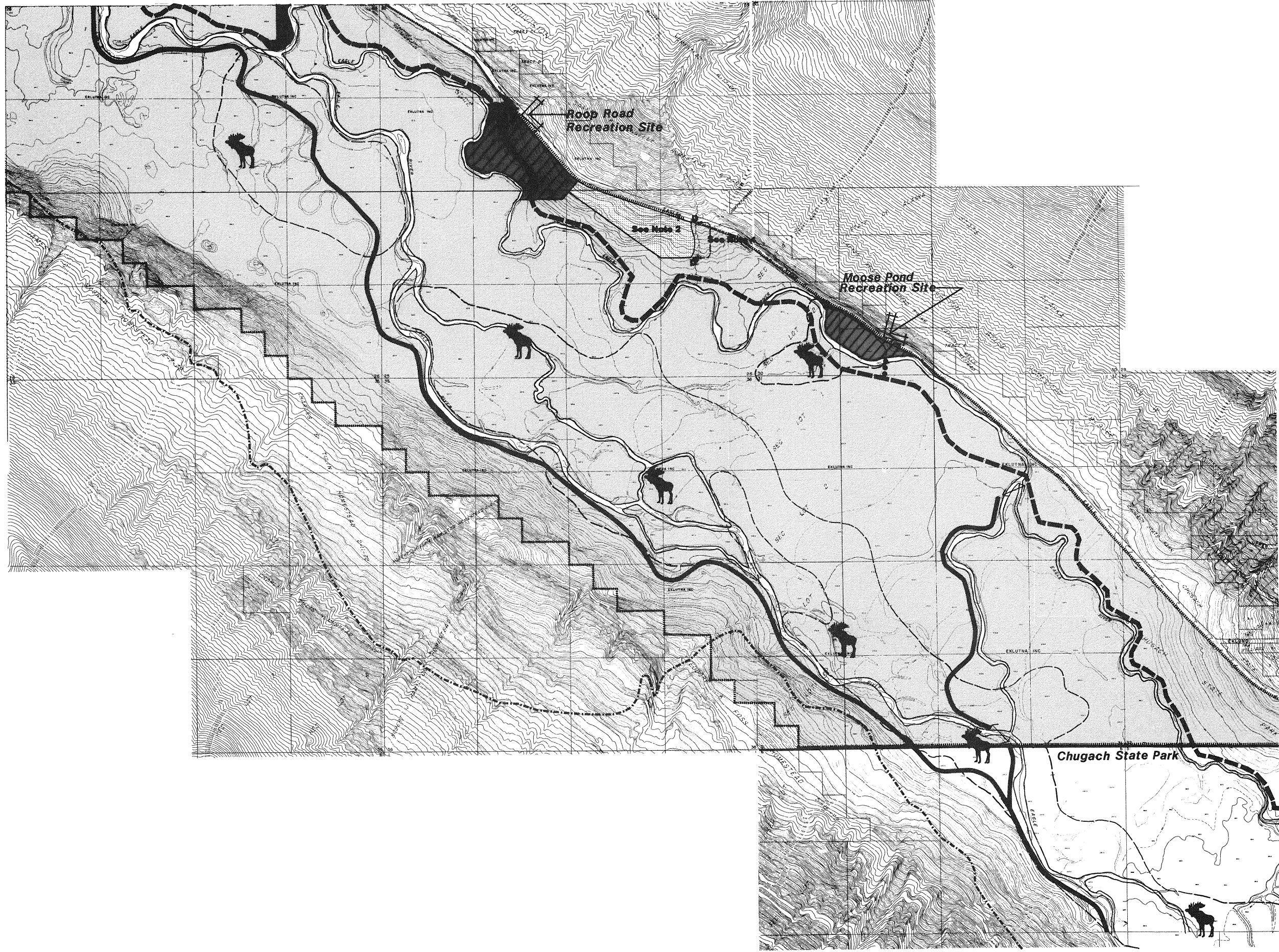
PROJECT TITLE

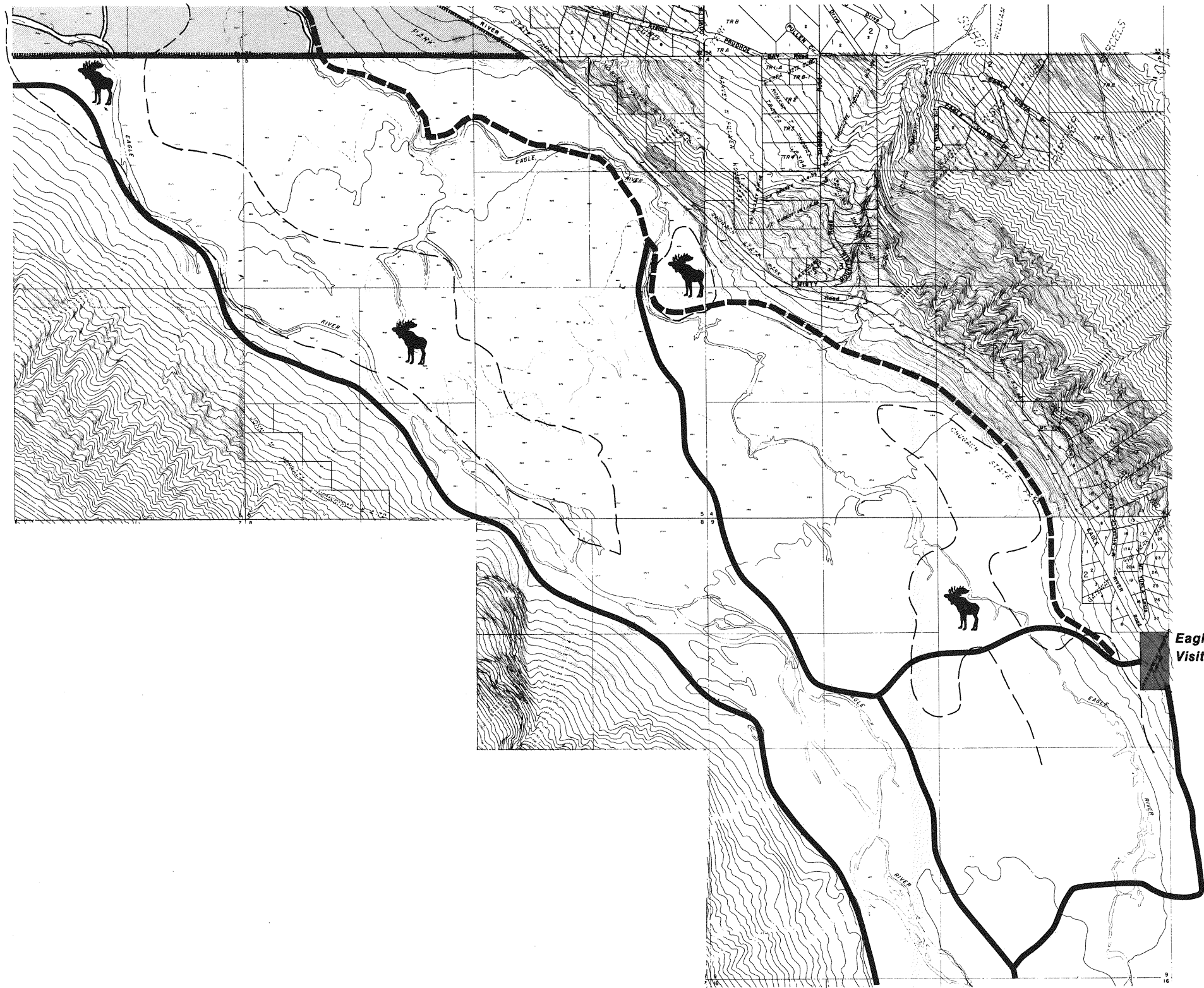
**EAGLE RIVER
GREENBELT PLAN**



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DATE: March, 1985
SCALE: 1" = 100'





Eagle River
Visitor Center

SHEET NO.

4

OF 4 SHEETS

IN THIS CATEGORY

**Eagle River
Greenbelt**

SOURCE: Field, map and photographic evaluation:
Municipal and TRAFarr Staff; Summer and
Fall, 1984.

PROJECT TITLE

**EAGLE RIVER
GREENBELT PLAN**



TRA/Farr
ARCHITECTURE ENGINEERING PLANNING INTERIORS
1001 E. BENSON BLVD., ANCHORAGE, AK 99508 (907) 277-2641

DATE: March, 1985
SCALE: 1" = 1400'

River Campground which is heavily used, particularly during summer. The State also owns about 15 acres of the South Fork Waterfalls site around the Upper Falls. The Municipality would add 22 acres of undeveloped land immediately to the south of the Eagle River Campground. Thus, given State and Municipal ownership of certain Greenbelt lands and sites and the recommendation for state acquisition of the Eagle River Campground Expansion site, the Municipal acquisition of Greenbelt lands and sites would total 3942 acres (96% of the total Greenbelt).

As indicated on the Greenbelt Map, several specific features are indicated in the delineation of this Greenbelt boundary. Along the ridge with the north facing slope on the south side of Eagle River in the lower valley there will be a buffer of 75' from the slope edge. The intent is to preserve a natural wooded edge at the bluff margin and avoid ridgeline intrusions similar to the Eagleridge and Parkview Terrace subdivisions on the north side. The development of elementary school sites is not precluded at the two areas indicated, though both are included within the Greenbelt boundary. The Greenbelt boundary in the lower valley on the north side in Section 17 and 18 follows the 150' trail corridor setback as per special limitation 10 on the R-3 SL² Zone (AO 84-101) and the rear lot lines of the individual lots identified along the southern portion of Parkview Terrace East Subdivision (S-7181A). As noted in the Greenbelt Map, stream buffers have been established specifying a 200' buffer along South Fork and a 50' buffer along the unnamed tributary creek between the Roop Road and Moose Pond sites. Finally, it was intended that the Eagle River Greenbelt have readily understandable boundaries. Thus, straight lines, property lines, existing roadways and natural features are used extensively to make the Eagle River Greenbelt a recognizable entity. For example, as one drives to the Eagle River Visitor Center, after coming down the last long downhill stretch to the beginning of the upper valley at the North Fork site, all of the land on the south side of Eagle River Loop Road up to the State Park is within the Greenbelt.

During the planning process the possibility of extending the Greenbelt along Eagle River to Knik Arm was raised. While the U.S. Army now permits recreational boaters to proceed downstream from the Glenn Highway to a point on the Fort Richardson Military Reservation, the extension of Greenbelt lands including trails and recreational facilities onto Army land will not be allowed under pre-

sent circumstances. Much of the lower portion of Eagle River is used as a training area and is essential to the Army's mission. However, under terms of the North Anchorage Land Agreement, if in the future the Ft. Richardson Military reservation is declared excess to Department of Defense needs, a greenbelt corridor would be transferred to the state extending two hundred feet from each bank from the Glenn Highway to Knik Arm.

TABLE 5
Greenbelt Lands and Sites

Greenbelt Category	Approximate Acreage
Lands	3848
Sites	
Eagle River Campground	62
Eagle River Campground Expansion	54
Bridge Site	13
South Fork Park	41
South Fork Waterfalls	34
North Fork	9
Roop Road	25
Moose Pond	9
TOTAL SITES	247
TOTAL Greenbelt	4095

D. RECOMMENDED RECREATIONAL SITES

It is recommended that the Municipality of Anchorage acquire six sites for development of public parks and recreational areas, and that the State of Alaska acquire lands adjacent to the Eagle River Campground for campground expansion and development of an intensive day use park area. Each of these sites would be linked by the main trail system and are described below. A preliminary estimate of recreation site development costs is detailed in Appendix A.

1. Eagle River Campground Expansion

This 54-acre site is the tract of land east of and adjoining the existing Eagle River Campground that is operated by the Division of Parks and Outdoor Recreation. It is recommended that the State of Alaska acquire this land, currently owned by Eklutna, Inc., and develop it for public day use activities and campground expansion. The site provides the best opportunity for public viewing of the lower segment of the Eagle River, where the majority of whitewater river use occurs. While no plans now exist for state acquisition of this area, the state has recently obtained an agreement with Eklutna, Inc., for management authority on these expansion lands.

2. Eagle River Bridge Site

This 13-acres site is on the south side of the Eagle River, just upstream to the east of the point where the proposed Eagle River Loop Road/Hiland Road Bridge crossing is to be built. Referred to as the "Eagle River Bridge Site", this site is primarily intended to provide river access to canoers, kayakers, rafters and other river users. The site would be accessible to both north and south bound traffic and connect to the site via a short access road.

3. South Fork Park

This 41-acres site is located on either side of the confluence of the South Fork of the Eagle River, with the main channel. Referred to as "South Fork Park", this site is intended to be developed as the primary community park along the south shore of the Eagle River. It would be accessible by automobiles via a new access road that would have to be developed connecting to Hiland Road. South Fork Park is intended to serve both as a major river access recreation site, and as a community park for the expanding residential area along Hiland Drive and in the South Fork area.

4. South Fork Waterfalls

This approximately 34-acre site is located on either side of the South Fork of Eagle River stretching from the Lower to the Upper Waterfalls. The Lower Waterfalls, also sometimes known as Barbara Falls, are close to 60 feet in height, and are among the

most spectacular natural features within the Municipality. The site would be developed for day use activity with viewing of the waterfalls the primary attraction. The Greenbelt would extend up the South Fork of the Eagle River and a pedestrian trail would link the South Fork Waterfalls with the South Fork Park to be developed at the Eagle river confluence. The Lower Waterfalls are currently privately owned by Barbara Gross while the Upper Waterfalls lies within a remnant of Chugach State Park land. The development of this site would continue the trail link from the Lower Falls a quarter mile upstream to an overlook for viewing the unusual rock gorge and the cascading power of a confined stream as it cuts through the ridge. That portion of state land identified for inclusion with this site should be reserved for that purpose.

5. North Fork Confluence

This approximately 9-acre site is located on the north river bank at the confluence of the North Fork of the Eagle River with the main channel. The site borders the river and Eagle River Road, and provides an ideal access point for winter and summer users of the river. The site would be developed for day use, including an auto parking lot, trail for canoe, kayak and raft portage to the river, small picnic area and valley overlooks.

6. Roop Road

This approximately 25-acre site is currently one of the most popular sites for access to the river by rafters and canoers. It borders the North Fork of the Eagle River approximately half way between the Chugach State Park Visitor Center and the North Fork Confluence Recreation Site. It offers an excellent opportunity to improve facilities for public access and convenience to serve as a year-round river access and trailhead staging area.

7. Moose Pond

The final site recommended to be acquired by the Municipality is an approximately 9-acre site immediately adjacent to the Eagle River Road just before entering Chugach State Park. Generally referred to as Moose Pond, the site includes a pond adjacent to the North Fork of the Eagle River and attracts moose during both winter and summer providing one of the best opportunities for public viewing of moose in

their natural habitat of any location in the Municipality. The site is primarily intended to be developed for viewing of moose from an overlook and parking lot to be developed adjacent to the Eagle River Road on the north edge of the site. Due to the presence of a moderate avalanche hazard zone at the eastern end of this site where parking now occurs, the preferred developmetn of this site should include a relocation for the parking area or at a minimum signage both interpreting avalanche occurence and advising of the hazard on-site.

E. RECOMMENDED TRAIL SYSTEM

The concept for the Greenbelt trail system is to introduce a network of trails developed to different standards, and intended for use by a variety of user groups. Two continuous trail corridors are planned, one on each side of the river for its entire length. Several points for crossing the river via footbridge, or perhaps a safe fording location, are planned. In this way, the trail system can provide the opportunity for a series of loop trails, allowing considerable variation in the sequence of movement through the Greenbelt, and opportunities for proper management to separate potentially incompatible trail uses. Connecting trails to existing and future schools as well as subdivisions area also recommended. In all, some 40 miles of trails are recommended for development. Moreover, because development patterns, particularly in the mid to upper valley areas cannot be foreseen, it is intended that trail connections at 1/4 to 1/2 mile intervals be made to the Greenbelt main trail.

The continuous trail loop system extends the entire length of the Greenbelt from the existing Eagle River Campground upstream, connecting to the Chugach State Park trail system and providing access to the Visitor Center (see Eagle River Greenbelt Map). A main trail, approximately 18.3 miles in length, would be developed on both the north and south sides to the South Fork Park site continuing up-valley on the north side only to Chugach State Park. A route of some 14 miles would continue on the south side only. This latter trail designation would not be developed to the level of the main trail and would be subject to relocation by user groups and others who wanted a simple, "primitive" pathway. The Eagle River Campground and the Chugach State Park Visitor Center are intended to serve as the two main destination points at either end of the trail system, with the six Municipal recreation sites all connected by the trail system and serving as intermediate access and destination points. A preliminary cost estimate for total system cost is detailed in Appendix B.

Throughout the planning for the Greenbelt, it has been recognized that user groups should be directly involved in development, operation and management of the greenbelt. Planning to date has concentrated on determining which lands should be included in the Greenbelt boundaries, and where recreational sites and trails should be located. However, there was considerable input by specific user groups at the public meetings and it has been considered in locating trails and other facilities.

The general concept for recreational use of the greenbelt is that the three Greenbelt segments will accommodate different levels and intensity of recreational use. The lower valley segment is intended to be the most intensively used and highly developed Greenbelt segment. Farther up the valley, the intensity of recreation use decreases and the facilities will be developed to a lower standard. The mid-valley segment will be developed initially with unpaved trails, but may be upgraded in future years as development pressure increases in adjacent uplands. The upper valley segment is intended to remain a somewhat primitive environment, with trails developed only to the level necessary to assure good year-round access.

1. Lower Valley

The first segment is intended to be the most intensively used and is the westernmost portion of the trail system between the Eagle River Campground and the South Fork Park Recreation Site upstream. This segment is adjacent to the most rapidly developing area of the Eagle River valley. It will provide a continuous main trail loop on both sides of the river, with three pedestrian bridge crossings of the river. The first crossing would be developed at the Eagle River Campground. It is recommended that the bridge be constructed on existing foundations of the old Palmer Highway Bridge.

The second crossing point is the site of the proposed Eagle River Bridge that would connect Hiland Road with Eagle River Loop Road. The automobile bridge is currently in the design and right-of-way acquisition stage of planning by the Alaska Department of Transportation and Public Facilities. The Municipality has worked closely with the DOT/PF to resolve the need for a safe, separated pedestrian crossing to be designed as part of the bridge structure. Bridge design will allow for a pedestrian walkway and bicycle trail to be constructed under-

neath the roadway, connecting to the Greenbelt on both the north and south sides of the river. In addition, an access road to the Eagle River Bridge recreation site would be built in conjunction with this roadway project.

The third pedestrian bridge crossing will occur at the South Fork Park recreational site. The South Fork Park will serve as the main anchor at the east end of the lower valley segment of the greenbelt.

The main trail within this segment is to be developed to Municipal hard surface standards. A series of connecting trails are also planned to provide pedestrian access to the proposed day use area adjacent to the existing Eagle River Campground and along the north riverbank in this area.

From the South Fork Park, the Greenbelt will extend up the South Fork of Eagle River along both riverbanks with a pedestrian trail along the east bank to the South Fork Waterfalls recreation site.

2. Mid-Valley

The second major trail segment is the area between the South Fork Park and the North Fork Confluence recreation site. Between these two recreation sites the trail closely follows the riverbank on each side, providing excellent opportunities for viewing the river, and for long views up and down the valley. No river crossing points are planned within this segment. The trail along the north riverbank would become the main trail and the trail along the south riverbank would be a route developed to a lower standard.

3. Upper Valley

Upstream from the North Fork Confluence the Eagle River divides into two channels. The main channel flows along the south edge of the valley, broadening out and becoming a wide, slow river with numerous gravel bars and channel islands. The trail route on the south side of the river would continue along the south riverbank of the main channel until it enters Chugach State Park. Within the park, a safe river fording site is identified to allow crossing the river and to provide a connection with a proposed trail across the valley to the Visitor Center.

From its confluence with the main channel, the North Fork of the Eagle River flows along the northern

edge of the valley, in some cases bordering the Eagle River Road. The trail would continue along the north riverbank away from the North Fork Confluence recreation site to the Roop Road Site, then cross the river whence the river abuts the Eagle River Road embankment. These crossings could be initially primitive in construction such as rope or cable bridges built by volunteer organizations or perhaps could be left simply as fords. The trail would continue along the south riverbank beyond the Moose Pond, then cross the river again to the north riverbank and continue on to the Chugach State Park Visitor Center.

F. USER GROUP PARTICIPATION

Within the three Greenbelt segments is a desire to separate potential incompatible user groups from each other, while still allowing access throughout the Greenbelt length for all users. For example, snow machine use currently occurs both on existing trails and Eagle River when frozen in the winter. Such loud, fast-moving motorized use is, however, incompatible with the quiet non-motorized experience of the cross country skier, winter hiker, dog musher or horserider. Thus, motorized uses such as snow machines should be well separated from other uses and confined to portions of the river. The several recreation sites provide the needed access and allow for this separation. Motorized boat use should be prohibited, however. It is anticipated that the principal users of the main trail system north of the river will be pedestrian and bicyclists in summer, and cross-country skiers in winter. These users will also use the loop trail system south of the river in the lower valley segment throughout the year.

In general, trail routes on the south side of the river upstream from the South Fork Park site are intended to be used principally by hikers and for equestrian use in summer and by dog mushers in winter. During winter months it is also anticipated that dog mushers will lay out winter snow trails within the river channel itself, and across the valley bottom. To a limited extent, horse and dog mushing use can coincide on a seasonal basis for the same trail. Given an expected low frequency of use (as anticipated on the south side), horse and hiker use can also co-exist on the same trails throughout the year. Thus, careful trails development and management could potentially provide for the special needs of all user groups with minimum conflict. An alternative route for horse, dog mushing and pedestrian travel, as well as motorized use, is the public use

easement known as "1D9" by the Bureau of Land Management and sometimes referred to as "Homesteaders Road". This 60 foot easement runs the entire length of the valley on the south side and at different locations provides both close proximity to the Greenbelt and more distant broad valley vistas from the higher side slopes of the valley. Since 1D9 parallels the Greenbelt, mention of this route is made since it could provide an alternative course for recreational travel.

During construction of the trail system and recreational sites, there will be opportunities for user groups and other volunteer groups to participate in development activities, under the supervision of the Municipality. Such opportunities could include trail clearing and grading, site clearing and construction of picnic areas, parking lots, and primitive bridges upstream among other facilities.

It is recommended that following adoption of the Eagle River Greenbelt Plan, the Municipality should coordinate and work with all user groups, Eklutna, Inc., and the State of Alaska to develop a long-term land use and recreational management plan for the Greenbelt. That planning effort should concentrate on opportunities for user groups and other volunteer groups to take on responsibility for development, maintenance and management of specific trail segments, in return for preferential use of those trail segments for their formal events and activities at selected times. Specifications on trail location and specific policies regarding site land use and recreational activities are perhaps best addressed in this management plan. Design and construction of Greenbelt facilities including the trails and recreational sites would then follow this Plan. However, the issue of recreational bow hunting was raised repeatedly during the planning process and should be addressed in this Plan. Bow-hunting by qualified archers for moose is currently allowed upon all drainages of Eagle River outside of Chugach State Park in September. This past year, up to 30 moose was the harvest limit. However, continued hunting is incompatible with the Greenbelt purpose of protecting wildlife for viewing and enjoyment. Moreover, such hunting poses a safety hazard because of the mix of hunting and other recreational use. Therefore, as with motorized boats, bow-hunting use should be prohibited. Nevertheless, as with other policies, these two issues could be re-examined in the Management Plan.

G. RELATIONSHIP TO THE ANCHORAGE COASTAL MANAGEMENT PLAN

The Anchorage Coastal Management Plan (ACMP) identifies most of the Greenbelt area as a Freshwater Marsh and Wetlands under the designation of Preservation Environment Coastal Resource Policy Unit. Moreover, under the ACMP, and as required by the Alaska Coastal Management Act, certain areas with unique values or special characteristics have been identified as Areas Meriting Special Attention (an AMSA). Eagle River Valley is among 10 such areas throughout the Municipality identified as an AMSA. This identification was made on the basis of the valley's richness in habitat value, its substantial recreational use and potential, impending land development, and the presence of significant natural hazards such as flooding and debris sliding. Both in terms of the Eagle River Valley Preservation Resource Unit goals and policies as well as those recommendations for this AMSA, the Eagle River Greenbelt Plan advances environmental protection while preventing public liabilities associated with development in these unsuitable areas.

The Anchorage Coastal Management Plan, in recommending a management strategy for the Eagle River Valley AMSA, called for a "site plan to identify proper uses which also give recognition to the physical constraints." The Municipality is required to prepare this plan in cooperation with the State Division of Parks and Outdoor Recreation and Eklutna, Inc., with priority attention given to mapping the floodplain and those areas needed for open space. This Greenbelt Plan and the process that produced it conform precisely to these requirements.

The principal objective of the Eagle River Greenbelt Plan is to protect the river corridor between the Eagle River Campground to Chugach State Park for recreational use and wildlife habitat. No development other than that required for necessary recreational facilities (e.g., trails, vehicular parking at the seven recreational sites, picnic tables, etc.) would be permitted in the Greenbelt with the possible exception of elementary school construction as indicated in the Recommended Greenbelt Map. Finally, as a result of the Greenbelt Plan, mapping of the 100-Year floodplain has also been completed. Thus, many of the concerns raised regarding the Eagle River Valley AMSA have been addressed in the Eagle River Greenbelt Plan.

The proper uses for the Eagle River Greenbelt are those uses consistent with the recommendations of the

Greenbelt Plan. Recreational development, including site development and trail construction as recommended in the Plan, leading to recreational use as indicated in the plan is proper use. With the qualification of possible future use refinements from the recommended management plan, uses such as walking, skiing, biking, rafting the river, dog-mushing, and snowmobiling on the frozen river in such a way as not to impair the experience of non-motorized users is proper. Development of a stock car race track or a gravel extraction area is an improper use. The policies for this Plan are subsumed in the narrative sections related to the Recommended Greenbelt, sites and trail system. Essentially, the management policy is to secure a protected river corridor for recreational development and wildlife habitat preservation.

Thus, it is recommended that the Eagle River Greenbelt Plan is the fulfillment of that ACMP recommendation regarding a "site plan" for the Eagle River Valley AMSA. Moreover, the Municipality of Anchorage finds and acknowledges that the Eagle River Greenbelt Plan is consistent with the adopted Anchorage Coastal Management Plan specifically in the former's fulfillment of the latter's goals and policies regarding the Preservation Environment Coastal Resource Policy Unit.

V. IMPLEMENTATION

How does this plan come into reality? What tools should be used at what times and in what locations to incorporate undeveloped private land into the Eagle River Greenbelt? Finally, how will such a resource be maintained and operated for the benefit of all? These questions address the challenge of securing the recommended Greenbelt.

The opportunity is unique. Unlike other local government efforts to secure a protected river corridor for recreation purposes, this 18-mile river corridor is essentially undeveloped and exclusively under private ownership between the Chugach State Park managed units at either end. Moreover, all but about 5 percent of the land which should be acquired is patented to Eklutna, Inc., an Alaskan Native Village corporation. As such, Eklutna, Inc. is exempt from taxation on unimproved property until 1991 under current law. Finally, the unique character of this river system is manifest in its wild beauty, where sweeping valley vistas can be appreciated, where moose, bear and wolves still freely move and where a diversity of raptors, waterfowl and anadromous fish can be viewed. Setting such an area aside in advance of development for its recreation and habitat values is precedent-setting. To meet this challenge, a strong measure of public support, community-wide cooperation and sensitivity to the needs of both landowner and land user is required.

Creative solutions in both acquisition and operation/maintenance will be needed. A wide spectrum of techniques can be used (see Table 6), some of which are described below. However, proposed development that enables public access and resource protection may achieve the same objective as acquisition. In such a case, given the provision for access and the incentive in protecting the site amenities, acquisition is potentially unnecessary, allowing acquisition funds to be expended elsewhere.

One peculiarity of the acquisition process for the Eagle River Greenbelt is the issue of split estate. Under terms of the Alaska Native Claims Settlement Act of 1971, village corporations, like Eklutna, Inc., were given the surface estate to certain lands while the regional corporations, like Cook Inlet Region, Inc., were given the subsurface estate from which any revenue (e.g. oil and gas or sand and gravel sales) was to be shared with the other Alaska Native Regional Corporations. Thus, one must be mindful that the acquisition of these Greenbelt lands attaches only to the surface estate.

Finally, for those properties bordering the Greenbelt, the use of plat and zoning case review as well as permitting can be used to both insure the integrity of the Greenbelt and protect the rights of property owners. For example, it is through the platting process that the connecting trails to the Greenbelt can be set aside, usually as an easement.

Table 6
Techniques and Sources for Greenbelt Acquisition

Cash Purchase

- o Municipal Government General Obligation Bonds
- o Taxation
- o State Funding (e.g., Legislative Appropriation, Municipal Entitlement)
- o Federal Funding (e.g., matching grant from Land and Water Conservation Fund)
- o Private Funding (e.g., corporate donations, foundation grants, etc.)
- o Bargain Sale

Land Transactions

- o Land Exchange
- o Land Sales/Leases
- o Dedicated Royalties from Public Land Resource Extraction

Reconveyance

- o Alaska Native Claims Settlement Act, Section 14(C)3

Land Trust

- o Nature Conservancy Purchase
- o "Eagle River Greenbelt Trust"

Conservation Easement

- o Conventional Conservation Easement for Private, non-Eklutna, Inc. Lands
- o For Eklutna, Inc. Lands Cluster Development and transfer of development rights elsewhere for Less-than-Fee Acquisition

A. ACQUISITION TECHNIQUES

1. Cash Purchase

Under a cash purchase arrangement, the willing seller and buyer agree on price and the seller receives the cash while the buyer obtains the land. A variety of funding sources are available to produce the necessary cash with the acquired land purchased for Fee or Less-than-Fee.

State Funding - A direct state legislative appropriation would provide significant acquisition funds and could be accomplished in a relatively short time. This approach has been used for other park and recreation items and is being pursued now. The 1985 state legislative package for the Municipality lists the Eagle River Greenbelt as priority 22 (a high priority), with a request for \$800,000 to begin acquisition.

Federal Funding - Federal funding for park land acquisition has greatly diminished over the last several years and could play only a minor role in total Greenbelt acquisition. The matching grant program from the Land and Water Conservation Fund, for example, has been an excellent source. However, the FY1985 level of statewide funding for this program will be in the range of \$600,000-\$650,000. Other federal funding such as Section 147 funds (PL 94-280), can make specific contributions to the Greenbelt plan. This source can allow for the construction of roadway access to boat launching ramps from a federally-aided bridge project. In Eagle River, the proposed bridge/roadway connection between Hiland Drive and Eagle River Road is seen as integral to the Eagle River Greenbelt. Funding would allow for both trail linkage via the bridge and vehicular access to a developed recreation site adjacent to the bridge.

Private Funding - This source may have great potential, but is untried and untapped. Several foundations exist nationally that support open space preservation. Local foundations are available which may be persuaded to provide acquisition grants for an Eagle River Greenbelt. Moreover, several large corporations, headquartered in Anchorage, could benefit greatly from the public relations value of securing recreational land and protecting habitat in a scenic valley such as Eagle River. The key for both foundation and corporate support is that the

request for help be appropriately voiced at the right level. The Greenbelt affords a unique, splendid opportunity for foundation/corporate contribution.

Bargain Sale - This approach to open space preservation has proved fruitful in many other cases, but depends in part on the benefits of a charitable deduction. A bargain sale is both part-sale and part-charitable contribution, allowing the land owner to combine the advantages of both a gift and sale. The difference between fair market value and actual selling price is that which the landowner can deduct as a charitable contribution. Thus, the public expenditure is reduced and the land obtained for Less-than-Fee. Because of the tax exemption until 1991 for Eklutna, Inc., a bargain sale may prove attractive only to that small portion of non-Eklutna lands.

2. Land Transactions

Land exists in the Municipal Heritage Land Bank and under State management which could be used through exchange, sale or perhaps operation to acquire Greenbelt lands. This technique is best applied through long-term agreements and ill-suited for short-term "fixes".

Land Exchange - A land exchange between Eklutna, Inc. and the Municipality and/or State could provide for a sizable greenbelt acquisition. As in all successful land exchanges, however, attaining a mutual advantage is the key. This is particularly true for application of this technique to the Eagle River Greenbelt. Because land would be exchanged on a value rather than acreage basis, a great deal of subjectivity and negotiation would be involved. Given the history and scale of this Greenbelt project, as well as the inherent complexities, the transaction will be difficult. Nevertheless, significant lands could be obtained through this approach.

Municipal lands in the Heritage Land Bank which would be good candidates for exchange in the Eagle River Valley area include those lands in the vicinity of Hiland Road and the Glenn Highway. While competing use demands on these lands have been expressed, some of these lands, in whole or in part, may still be freed for exchange.

Alternatively, those isolated parcels of Chugach State Park land, particularly on the south side of Eagle River valley, are excellent exchange candidates. These parcels have no other competing demands and, given their isolated situation, present management difficulties. Two options exist for a land exchange between the State Division of Parks and Outdoor Recreation and Eklutna, Inc., which would benefit the Eagle River Greenbelt. Eklutna, Inc. could receive these remnant park parcels (except for the reservation of state land needed for the Upper Waterfalls portion of the South Fork Waterfalls site) in exchange for Eklutna, Inc. land in the Greenbelt which would then come under Municipal ownership and management. Under this first option the state could be compensated for this Greenbelt conveyance to the Municipality by Municipal conveyance of Bird Creek Park to Chugach State Park. The second option would simply result in the expansion of the State Park into the "channel island" area of the upper valley in exchange for Eklutna's selection of the remnant park parcels. The State becomes free of land management difficulties, Eklutna obtains better developable land and the Municipality obtains Greenbelt land with everyone benefiting.

Land Sale/Lease - The income generated from disposal or lease of Municipal land could potentially be tapped for Greenbelt acquisitions. The "symmetry" of land yielding the means for other land acquisition provides a rationale. With over 12,000 acres of Municipal land in the Heritage Land Bank and with pending disposals, this approach should be evaluated.

Dedicated Royalties - There is much public land within the Municipality which is rich in resource potential, particularly sand and gravel. Under this approach, royalties from the operation of resource extraction would be dedicated to Greenbelt acquisition. In Girdwood there is much land which could be used in this manner (e.g., the state-owned gravel resources adjacent to Glacier Creek). Such dedicated royalties from either Municipal or State run operations could be obtained. The case for compelling state interest in acquiring Greenbelt land should be pursued if such a justification is needed for State participation.

3. Reconveyance

Section 14(C)3 of the Alaska Native Claims Settlement Act provides for the return of conveyed native land for certain public purposes (e.g., schools, fire protection, open space). In the Anchorage Municipality, reconveyance requirements apply to Eklutna, Inc. In the Agreement of Compromise and Settlement, signed April 3, 1979, between Eklutna, Inc., the Municipality and the State, all reconveyance issues were settled. Among these issues resolved was a reconveyance for an open space reserve along Eagle River allowing the Municipality to construct trails for non-motorized public recreation use. The scope of this reconveyance is limited, however, to the 100-year floodplain of Eagle River on the north side only from the western boundary of Eklutna, Inc. to Gruening Junior High School and again on the north side only, a 30-foot easement from the same western boundary to Gruening Junior High School. No further open space reconveyances for Eagle River or anywhere else will occur. While this contribution is minor, it does allow for the no-cost acquisition of an important trail link adjacent to a large subdivision and school.

4. Land Trust

A land trust is generally conceived as a non-profit, community-based organization which seeks to protect land for public use and enjoyment through the acquisition of property, easements and other interests in real property. In a broader sense, any land acquired and held in the public interest by a conservation organization for eventual public ownership could be termed a land trust approach.

Nature Conservancy - The Nature Conservancy is a nationally known conservation organization based in Alexandria, Virginia. Its mission is the preservation of natural diversity through identification, protection and land management. Often, the Nature Conservancy has acted to acquire critical areas and hold them for later repurchase by other public entities. In the Eagle River Greenbelt, the key habitat area described previously as that channel island area of approximately 650 acres adjacent to Chugach State Park would make an ideal candidate for Nature Conservancy action. However, such action would only follow a strong commitment for public payback. A strong commitment would be seen as a promise to pro-

vide funds by a certain date or a land exchange as reimbursement on a value for value basis.

"Eagle River Greenbelt Trust" - A conventional land trust, perhaps of this name, could be organized as the vehicle for Greenbelt acquisition. Such a trust could serve as the conduit for private funding discussed above. Though such trusts are commonly found with open space preservation efforts often involving a multiplicity of landowners all subject to federal taxation, the near absence of these conditions here should not preclude this approach. Given the untapped promise of private funding, a Greenbelt Trust should be pursued.

5. Conservation Easement

Conservation easements permit land preservation without a fee simple acquisition. Unlike other easements, the conservation easement is negative in that certain uses of the property are denied, though certain affirmative uses, such as trails, may be allowed. Where continuation of private use is consistent with public objectives and where the charitable tax deduction with such easements under the federal income tax law is attractive, the conventional conservation easement will prove helpful. This approach may prove fruitful for those non-Eklutna, Inc. lands.

A more unconventional conservation easement could be designed for Eklutna, Inc. lands. Such a mechanism would allow for Greenbelt lands to be identified as a "preservation zone." The development rights that would normally apply to those lands under existing zoning in the "preservation zone" could then be used elsewhere. In exchange, the purchase price for the "preservation zone" would be discounted enabling a Less-than-Fee acquisition. This approach is already allowed under the cluster housing ordinance, but improves upon that in that this could be negotiated, concluded and certain in advance of development. A systematic program of putting the Greenbelt together is served by this approach rather than a fragmentary, reactive position of uncertain implementation by conventional cluster development. The approach proposed here would allow the development rights to be applied at any time within the area of Eklutna, Inc. ownership. Hence, this flexibility could benefit both the Municipality and Eklutna, Inc.

B. PRIORITIES

Given the present heavy demand for water-based recreation/tourism upon Eagle River coupled with the rapid growth of residential development in the area, acquisition of all Greenbelt lands and sites should take precedence. During the summer, Eagle River is heavily used by canoeists, kayakers and rafters (see previous discussion of recreational use in the Land Use Section). These uses range from sport and recreation to tourist packages and have been concentrated at several of the proposed recreation sites. In August each year, for example, the state canoe and kayak slalom championship is held on Eagle River near the State Campground. Adequate vehicular access and parking as well as improved river access are needed to match this broad river use demand, the current largest and most consistent recreational demand. The explosive pace and distribution of residential growth in the Eagle River area must also be remembered. As mentioned previously and depicted on the Land Status Map (Map 5), the population concentration resulting from more urban and suburban residential use in the lower valley will continue into the near future. This pattern will persist and expand on both north and south sides of the lower valley, bringing with it a demand for open space and trail use recreation. Thus, as indicated in the preceding text and in the Recommended Greenbelt Plan Map, this acquisition should be sufficiently large to provide both for recreational development and wildlife habitat protection. The Recommended Greenbelt accomplishes these objectives within sensible, easily recognized boundaries. Given the large area under Eklutna, Inc. ownership (3890 acres or 95% of the acquisition total), it may prove useful to define the structure of negotiation for acquisition. The "how" and "when" of acquisition is often as critical as the "what". With an "umbrella" agreement to guide negotiation on the manner and basis for incorporation of Eklutna, Inc. lands within the Greenbelt, acquisition may proceed more smoothly.

Once the land base for the Greenbelt is acquired, then the needed development work for trails and recreation sites may begin. Given the present trend of concentrated use along the river by canoeists, kayakers, and rafters, as well as patterns of residential growth, recreational development should follow where demand and population warrant. Thus, development priorities upon acquisition, in priority order from first to third, would include;

1. the six recreational sites up-valley from and not including the Eagle River Campground Expansion site,
2. the Greenbelt in the lower valley (from the Eagle River Campground up to the South Fork park site and including up to the South Fork Waterfalls site) and
3. the Greenbelt in the upper valley.

C. MANAGEMENT TECHNIQUES

Once acquired, the development of those necessary sites, facilities and services can begin. Work should begin with the six sites, particularly those more directly related to water-based use recreation. Development work related to trail construction should follow, beginning with the lower valley and proceeding upstream.

Ongoing management of the Eagle River Greenbelt will be the key to its success. Several comments from concerned residents and users have already emphasized the importance of maintenance and an ongoing program of care and repair. A clean, protected recreational resource will be inviting and yield the use and enjoyment intended. But because of the size and scope of this Greenbelt, new management programs and revenue sources will likely be needed. The existing Eagle River Park and Recreation service district with its property tax of 0.07 million per \$1000 assessed valuation for park/recreation operations and maintenance is relatively low. Four broad management programs and revenue sources which may contribute to a properly run Greenbelt are listed in Table 7 and described below.

Table 7

**Management Programs and Revenue Sources
for Operations and Maintenance**

Park Concession Fees

Taxation

- o Increase in mill rates to authorized levels
- o Municipal-wide park service district

Land Trust

- o "Eagle River Greenbelt Trust"

Volunteer Efforts

- o Assistance in trail development and maintenance by user groups

1. Park Concession Fees

Given the extensive current recreational use throughout the valley and anticipated heavy demand for use upon development of the Greenbelt, park concessions providing guiding services and equipment rentals might provide substantial revenues for management programs. The rentals of canoes, rafts, bikes and skis, for example, can expect to receive heavy use. Guiding and interpreting services making full use of the Greenbelt proximity to Chugach State Park might also be lucrative. A range of concession services and equipment rental could make a substantive contribution to Greenbelt operation and maintenance.

2. Taxation

Anticipated recreational use mandates the search for alternative management options that work both well and fairly as indicated above. The operation and management of an Eagle River Greenbelt Park should not be the sole responsibility of any existing service district given its size and Municipal-wide attraction. Proposals for a Municipal-wide park and recreation service district as well as special designated districts have been made and are under discussion. It is the Administration's intention to provide for park and recreation needs with equity and efficiency.

Parks and Recreation programs and operations are maintained both through a property tax mill levy and to a much lesser extent by user fees. Because this levy is tied to the particular services provided within each park service district, the tax varies. In the Eagle River Park and Recreation Service District, the mill levy in 1984 was authorized at 0.07 mill per \$1,000 assessed valuation, yet the 1984 rate is well below the maximum of 0.50 mill. In other words, though \$50 per 100,000 home has been authorized as the ceiling for park and recreation taxes, only \$7 for such a home was collected. By contrast, in the Anchorage district, the mill levy has no authorized ceiling with the 1984 mill levy set at 0.47 mill per \$1,000 assessed valuation. All of this revenue from each of the service districts provides for operation and maintenance.

The increase in park and recreation service district mill levies to a level closer to the authorized ceiling would certainly generate more operating revenue to sustain Greenbelt management. Moreover, some residents have already expressed a willingness to directly pay for such service. Nevertheless, taxation, whether for Greenbelt acquisition or management, must be fair and distributed in some measure appropriate to its nature and proportional to its use. The Eagle River Greenbelt is, by far, the largest Municipal greenbelt. Use by canoes/kayaks/rafts is currently high and involves more than Eagle River residents. When fully developed, extensive use by both residents throughout the Municipality and tourists can be foreseen.

3. Land Trust

An "Eagle River Greenbelt Trust" is proposed as an acquisition technique, but could equally serve as a management group to ensure the integrity of the Greenbelt. Such a trust might serve to provide needed land management in those "transition areas" where transfer of ownership is expected or in those difficult areas where neither public or private entity feels that surveillance and control is warranted given limited funds/personnel. Moreover, trust management authority may be ideal on a leasehold basis for much of the Greenbelt (particularly the nearly 650 acres of upstream "channel island" area adjacent to Chugach State Park). An "Eagle River Greenbelt Trust" wielding such authority could be organized into a board of directors with representatives from Eklutna, Inc., the public sector and concerned residents. In that form, a cross-section of views is represented and Greenbelt management is advanced without strain on either the public or private entities.

4. Volunteer Efforts

Volunteer groups have already demonstrated their effectiveness in helping provide needed recreation services (e.g., cross-country ski track-setting by the Nordic Ski Club of Anchorage). This same spirit could be harnessed for benefit of the Eagle River Greenbelt. Volunteer assistance could be rendered in trail development and maintenance by user groups. In the upper valley on the north side, the main trail crosses several river channels. A project lending itself to outdoor adventure organizations would be construction of rope bridges or other

"primitive" applications in keeping with the wilder, less developed upper valley. On the south side a route has been identified which could lend itself to dog mushing. Again, a program of "user group adoption" which could consist of trail brushing and maintenance would be very effective in extending public efforts toward greenbelt management.

APPENDIX A

RECREATION SITES
PRELIMINARY DEVELOPMENT COST ESTIMATES

Eagle River Bridge Site

Access Road (1500 LF)	300,000
Parking (30 cars)	75,000
Day Use Picnic Area	45,000
Boat Put-in	25,000
Restrooms (1)	75,000
Construction Contingency	50,000
Sub-total	<u>570,000</u>

South Fork Park

Internal Park Road (3600 LF)	500,000
Parking (160 cars)	400,000
Caretaker's Residence	125,000
Restrooms (3)	225,000
Camping Loop (15 campsites)	350,000
Picnic Area	125,000
Interpretive Display/Salmon Viewing Area	30,000
Park Trails (5700 LF)	170,000
Construction Contingency	200,000
Sub-total	<u>2,125,000</u>

South Fork Waterfall Site

Greenbelt Trails (3500 LF)	105,000
Viewing Platform	75,000
Construction Contingency	20,000
Sub-total	<u>200,000</u>

North Fork Confluence Site

Access Road (1000 LF)	150,000
Parking (12 cars)	30,000
Park Trails (1500 LF)	45,000
Picnic Area/Boat Put-in	30,000
Construction Contingency	25,000
Sub-total	<u>280,000</u>

Roop Road Site

Access Road (700 LF)	100,000
Parking (80 cars)	200,000
Restrooms (1)	75,000
Wetland Boardwalk (500 LF)	50,000
Park Trails (3400 LF)	100,000
Construction Contingency	50,000
Sub-total	<u>575,000</u>

Moose Pond Site

Parking Lot (10 cars)	25,000
Viewing Platform	75,000
Construction Contingency	20,000
Sub-total	<u>120,000</u>

Miscellaneous

Pedestrian Bridges accross Eagle River (3)	600,000
Traffic Control and Trail Signage (lump)	100,000
Sub-total	<u>700,000</u>

RECREATION SITES TOTAL \$4,570,000

APPENDIX B

GREENBELT TRAIL SYSTEM
PRELIMINARY DEVELOPMENT COST ESTIMATES

	<u>Mileage</u>	<u>Cost</u>
1) MAIN TRAIL		
Asphalt Paved Bicycle Trail Standard		
- Cut/Fill Slope Construction	0.7 mi.	500,000
- Dry land Construction	3.8 mi.	950,000
- Wetland Construction	1.8 mi.	900,000
Sub-total	6.3 mi.	\$2,350,000
Gravel Path (6' Wide) Standard		
- Dryland Construction	8.0 mi.	1,183,000
- Wetland Construction	4.0 mi.	803,000
Sub-total	12.0 mi.	\$1,986,000
Construction Contingency		<u>\$434,000</u>
MAIN TRAIL TOTAL		\$4,770,000
2) TRAIL ROUTES		
Clearing and Minimal Grading Standard	14.1 mi.	\$1,117,000
Sub-total		\$1,117,000
3) CONNECTING TRAILS		
Gravel Path (6' Wide) Standard	7.3 mi.	\$1,080,000
Sub-total		<u>\$1,080,000</u>
Construction Contingency		<u>\$500,000</u>
GREENBELT TRAIL SYSTEM TOTAL (39.7 mi.)		\$7,467,000

NOTE: This trail development cost could likely be significantly reduced through the participation of several user groups through volunteer development work.

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Agencies contacted:

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